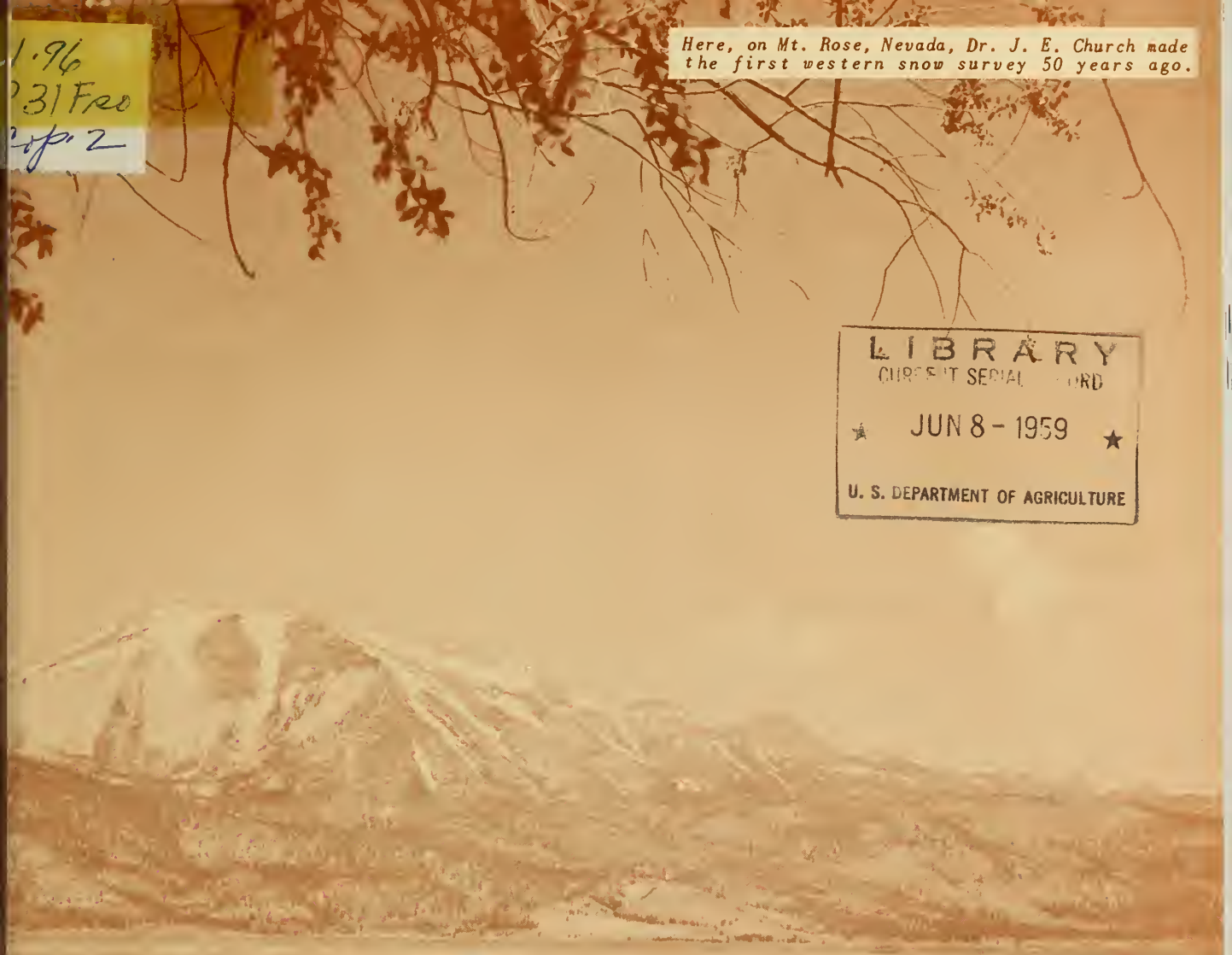

Here, on Mt. Rose, Nevada, Dr. J. E. Church made the first western snow survey 50 years ago.

FEDERAL - STATE - PRIVATE COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS for OREGON

UNITED STATES DEPARTMENT of AGRICULTURE
SOIL CONSERVATION SERVICE
and
OREGON AGRICULTURAL EXPERIMENT STATION

Data contained in this report were obtained by the agencies named above in cooperation with other Federal, State and private organizations.

AS OF
JAN. 1, 1959

UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

TO RECIPIENTS OF COOPERATIVE SNOW SURVEY AND WATER SUPPLY FORECAST REPORTS:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Fortunately, most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from fore-knowledge of the runoff.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, about 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1300 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

By relating snow survey measurements taken over a period of years to spring-summer runoff during the same period, relationships have been developed which make it possible to forecast seasonal runoff several months in advance of occurrence. In order to make a forecast, once a forecast relationship has been developed, the maximum snow water content at previously selected key snow courses is usually entered in the forecast relationship. More accurate forecasts are often obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast relationships.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions.

PUBLISHED BY SOIL CONSERVATION SERVICE

REPORTS	ISSUED	COOPERATING WITH	LOCATION
RIVER BASINS			
Colorado, Rio Grande and Arkansas	Monthly (Feb.-May)	Colo. Exp. Station Colo. State Engineer New Mexico State Engineer	Ft. Collins, Colo.
Columbia *Includes Alaska*	Monthly (Jan.-May)	Idaho State Engineer	Boise, Idaho
Upper Missouri	Monthly (Feb.-May)	Mont. Agr. Exp. Station	Bozeman, Montana
West-Wide	(Oct. 1, Apr. 1 and May 1)	Cooperators	Portland, Oregon
STATES			
Arizona	Semi-Monthly (Jan. 15-Apr. 1)	Salt R. Valley Water Users Association	Phoenix, Arizona
Nevada	Monthly (Feb.-Apr.)	Nevada State Engineer	Reno, Nevada
Oregon	Monthly (Jan.-May)	Ore. Agr. Exp. Station	Portland, Oregon
Utah	Monthly (Jan.-May)	Utah State Engineer Utah Agr. Exp. Station	Salt Lake City, Utah
Washington	Monthly (Feb.-May)	Wash. State Dept. of Conservation	Spokane, Washington
Wyoming	Monthly (Feb.-June)	Wyoming State Engineer	Casper, Wyoming

Copies of the various reports may be secured from: Head, Water Supply Forecasting Section
Soil Conservation Service
209 S.W. 5th Avenue, Portland 4, Oregon

PUBLISHED BY OTHER AGENCIES

OTHER SNOW SURVEY REPORTS			
British Columbia	Monthly (Feb.-June)	Comptroller, Water Rights Br., Dept. of Lands and Forests. Parliament Bldgs. Victoria, B.C.	
California	Monthly (Feb.-May)	California Department of Water Resources. Sacramento, California	

FEDERAL - STATE - PRIVATE COOPERATIVE

SNOW SURVEY and WATER SUPPLY FORECASTS

for

OREGON

ISSUED

January 8, 1959

Report prepared by

W. T. FROST, Snow Survey Supervisor

and

MANES BARTON, Assistant Snow Survey Supervisor

SOIL CONSERVATION SERVICE
209 S.W. 5TH AVE. PORTLAND 4, OREGON

Issued by

THOMAS P. HELSETH
STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE

F. EARL PRICE
DIRECTOR
OREGON AGRICULTURAL
EXPERIMENT STATION

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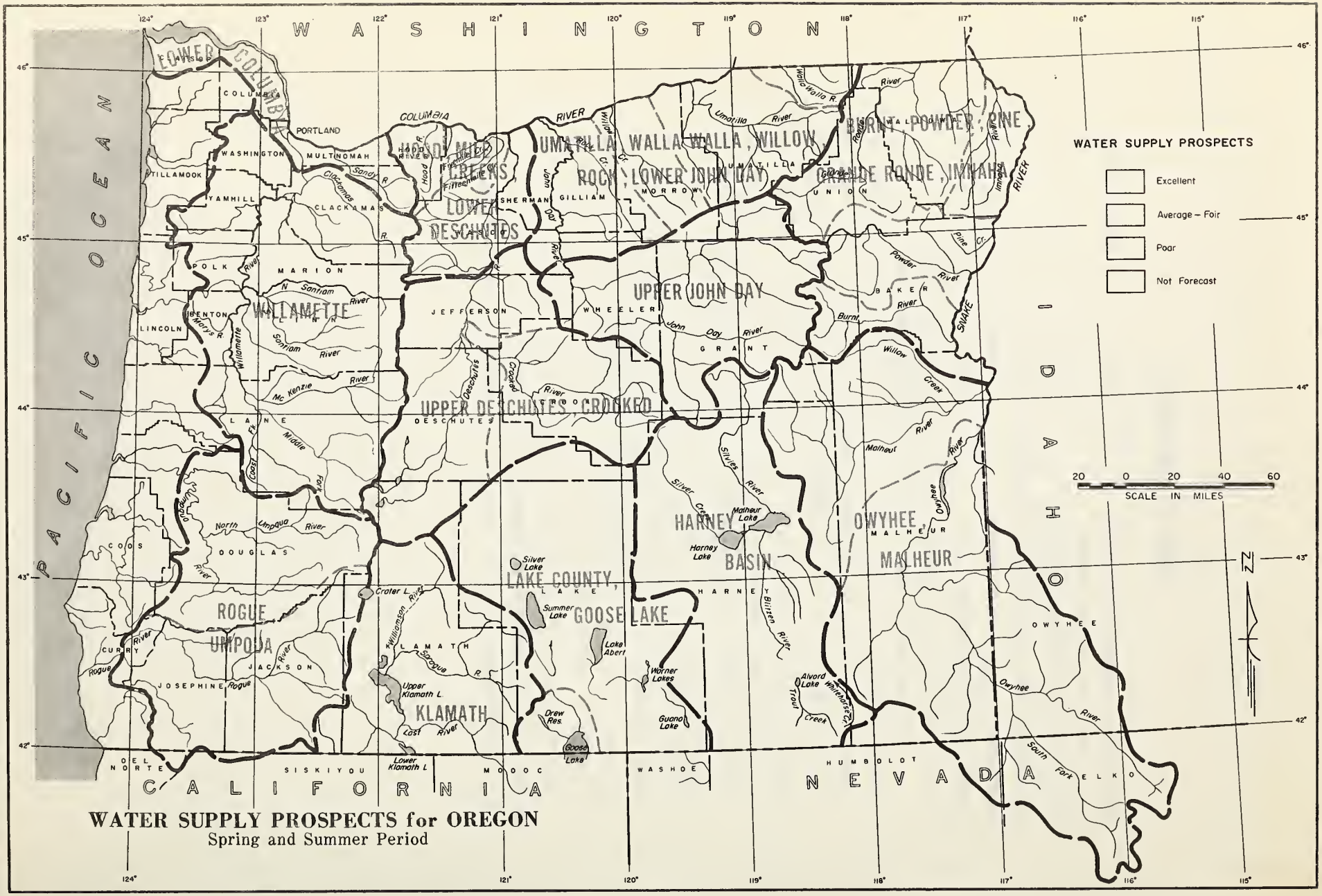


WATER SUPPLY PROSPECTS for OREGON

Spring and Summer Period

WATER SUPPLY OUTLOOK for OREGON

January 1, 1959

Outlook for Oregon's 1959 water supply, as of this early winter date, is not good. However, reservoired water supplies are excellent with most reservoirs holding well above average amounts. The mountain snow-pack averages a new record low according to current snow surveys.

SNOW-COVER:

Water content of mountain snow-cover in Oregon averages only 17 percent of the January 1 normal compared with 120 percent at this date last year. Although snow is in short supply throughout the state, it appears to be least short in the northeastern counties.

Normally, about 39 percent of the total winter's "snow crop" is accumulated by January 1. Thus far this year we have accumulated only 6 percent of the normal winter's "crop". Most of our major winter storms have brought rainfall rather than snowfall because of the unusually warm temperatures.

It is possible that future snow storms might "make up" the present shortage of snow. However, in only 4 out of the past 30 years has the snow-pack come up to normal by April or May 1st when it was much below normal on January 1.

SOIL-MOISTURE:

Mountain soils in the Cascades are satisfactorily wetted. In the mountainous regions of eastern Oregon the soils are only moderately wetted; conditions being generally somewhat better than last year.

RESERVOIRED WATER:

Stored water in 20 important irrigation reservoirs is now 132 percent of the average January 1 amount and slightly better than last year. All of these reservoirs now hold above normal water supplies with the exception of Agency Valley, Unity, and McKay which are somewhat below normal. Emigrant Gap Reservoir has been lowered for construction purposes.

A continuation of abnormally warm winter temperatures will favor a rapid runoff in all streams. This early runoff will fill reservoirs at earlier than normal dates.

PRECIPITATION:

State-wide precipitation[1] averages 73 percent normal at 13 valley stations for the October through December period. Precipitation has been only half normal or less in the vicinity of Enterprise, Burns, Nyssa, Lakeview, Klamath Falls and Medford. In most other places it has been nearer normal.

STREAMFLOW:

Present outlook for the 1959 April through September irrigation season is for

[1] *From preliminary data furnished by U.S. Weather Bureau, Portland, Oregon.*
[2] *From preliminary data furnished by U.S. Geological Survey, Portland, Oregon.*

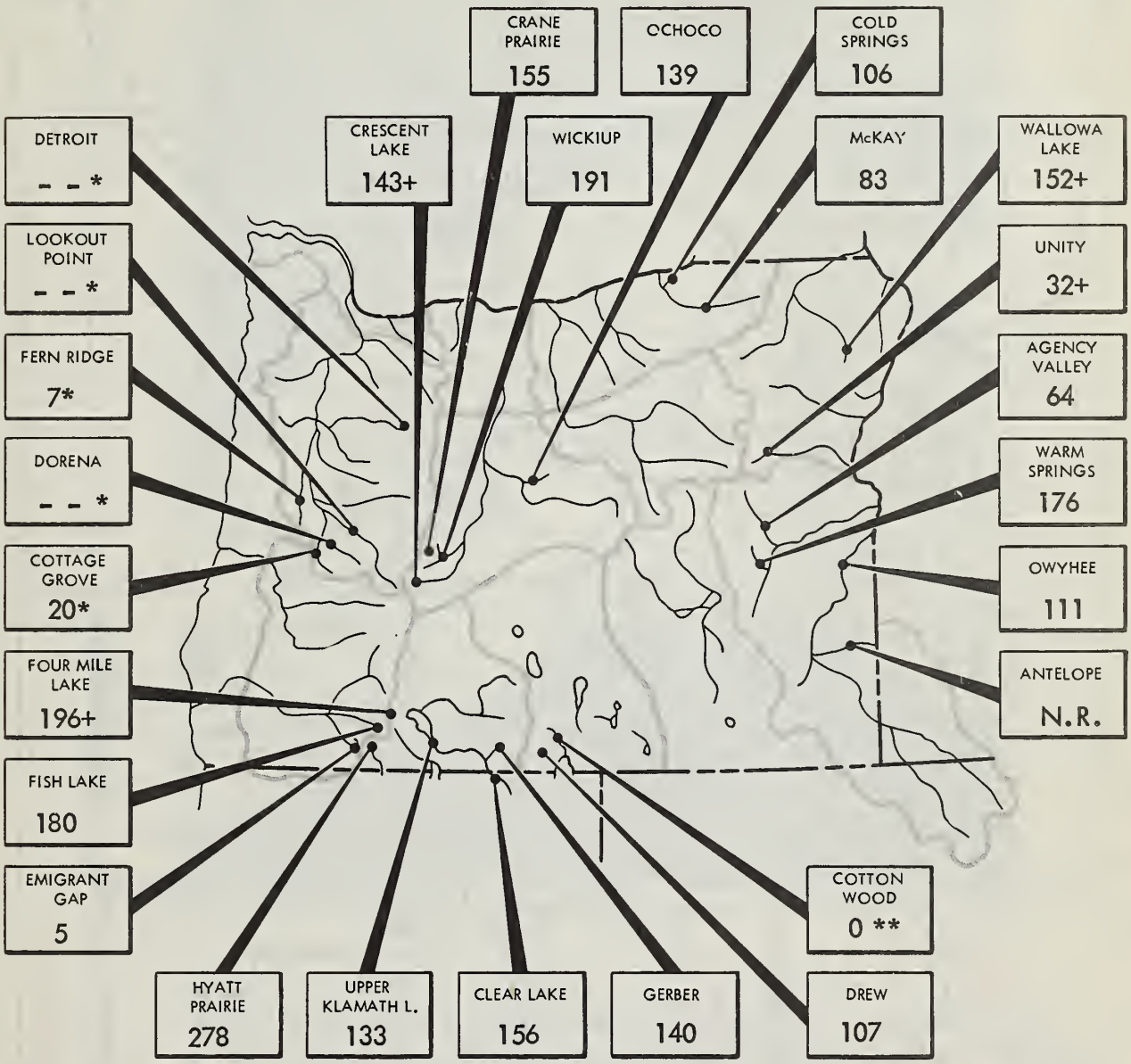
much below average streamflow unless succeeding winter storms produce much above average amounts of snow-stored water.

If winter temperatures continue to be abnormally high the resulting mid-winter runoff will reduce the total snow-pack and therefore leave a bad effect upon the water outlook for irrigated lands served from direct runoff.

Flow [2] of key Oregon streams during the period October through December has been highly varied with heaviest flows (134 percent normal) into Upper Klamath Lake and lowest flows in the Umpqua (56 percent) and the Rogue (78 percent).

STORAGE STATUS of OREGON RESERVOIRS

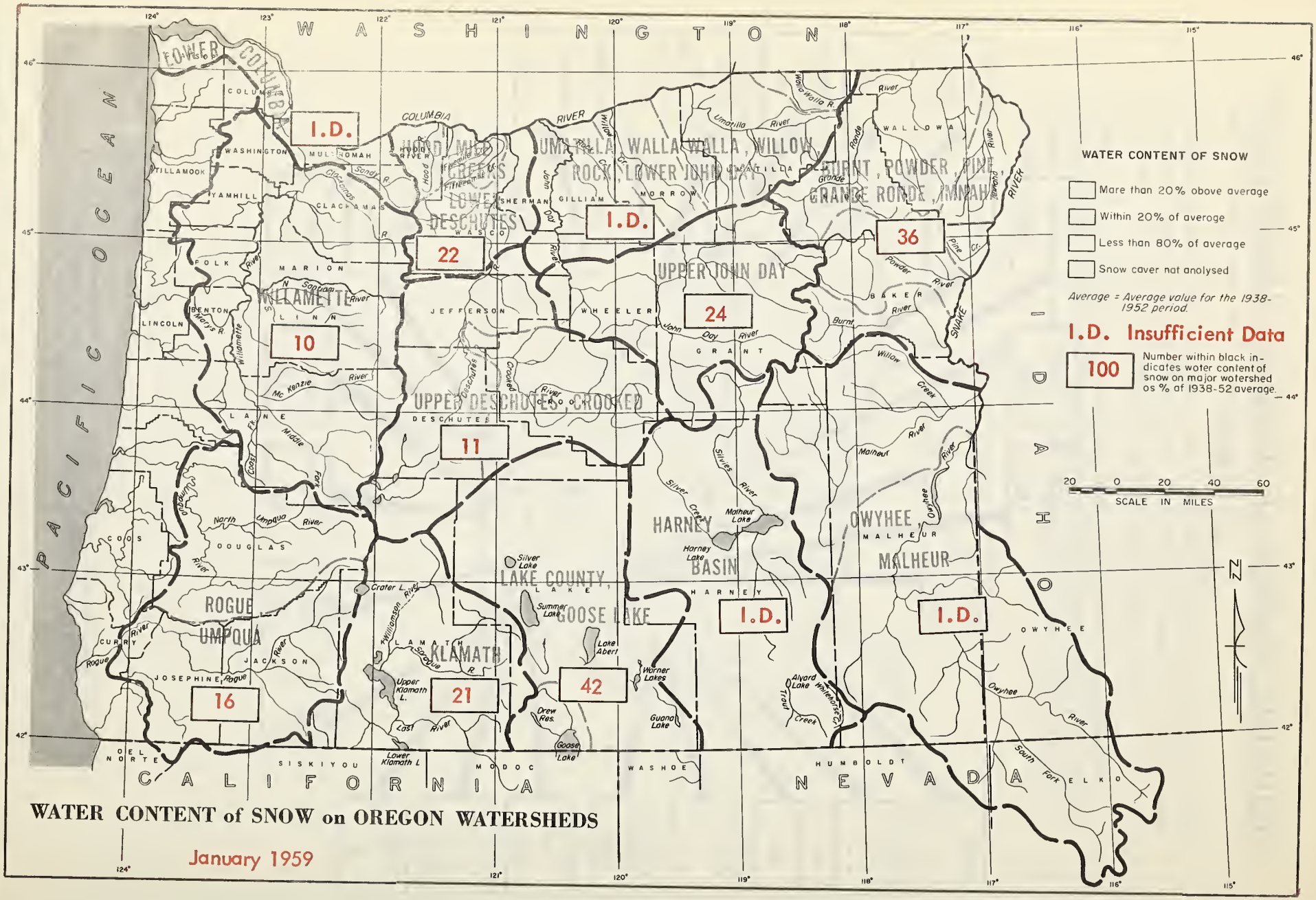
January 1, 1959



Figures given are usable storage as percent of 1938-52, 15 year average.

** - Multiple purpose reservoir - space reserved primarily for flood runoff.*

N R. - No report. *** - Empty - as is usual for this date.*

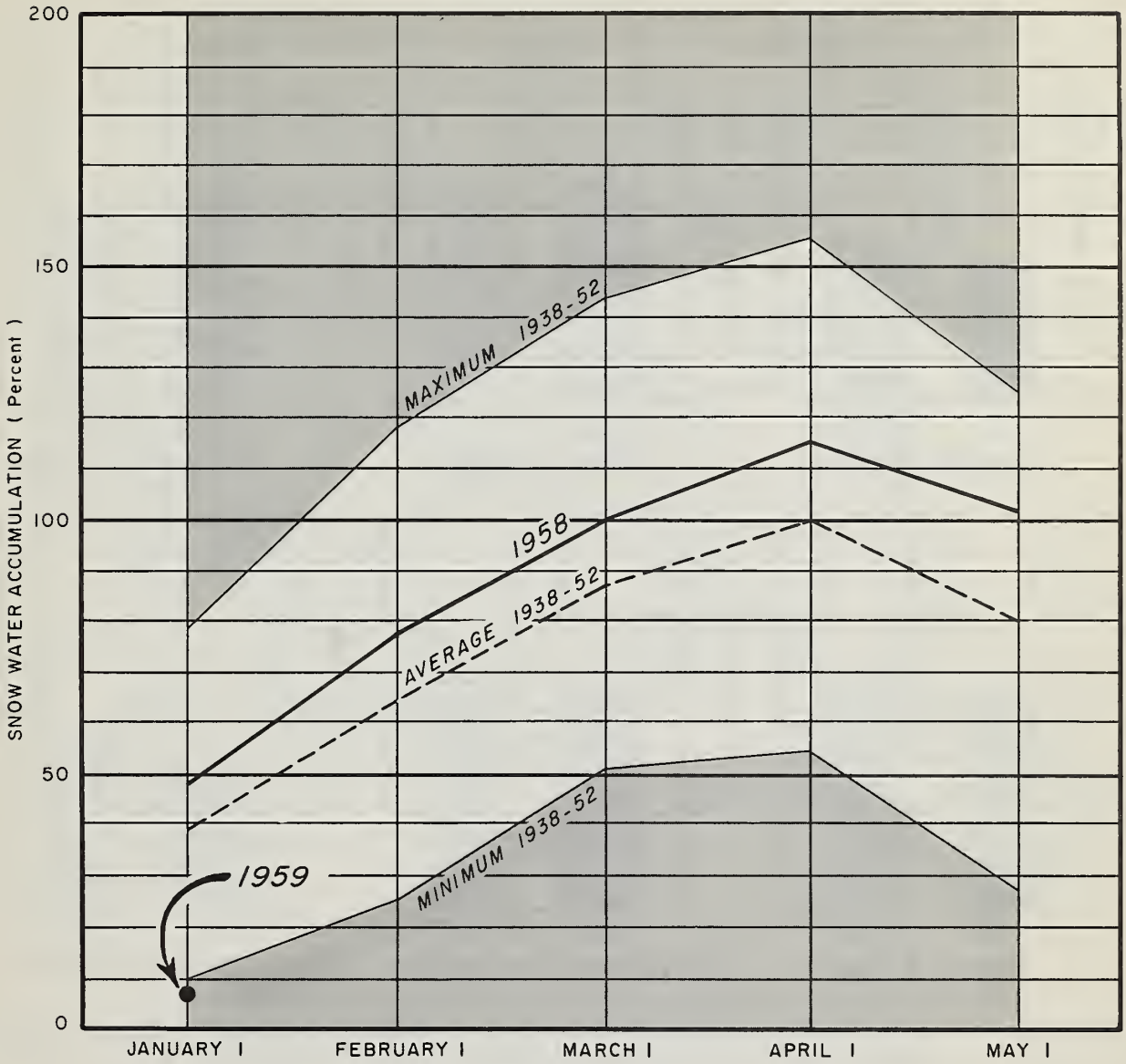


WATER CONTENT of SNOW on OREGON WATERSHEDS

January 1959

SNOW WATER ACCUMULATION in OREGON

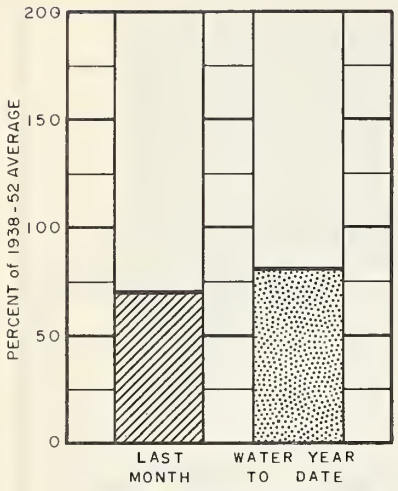
January 1, 1959



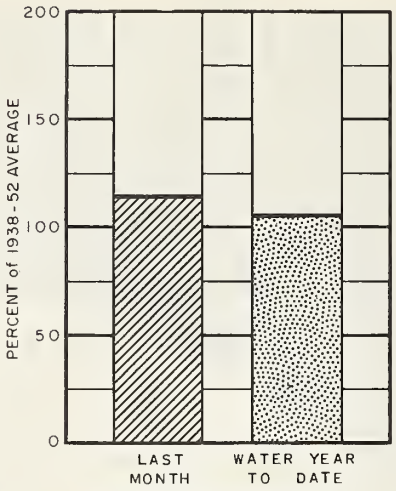
Usually by January 1 there is about 39 percent of the winter's snow water accumulated in the mountains. This year only 6 percent has accumulated. This is the lowest snow water accumulation on January 1 since records were begun in 1928.

CURRENT OREGON STREAMFLOW

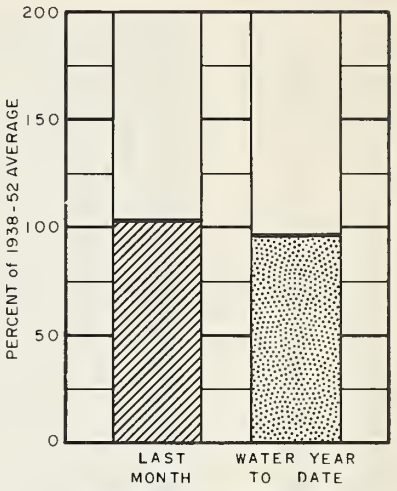
January 1, 1959



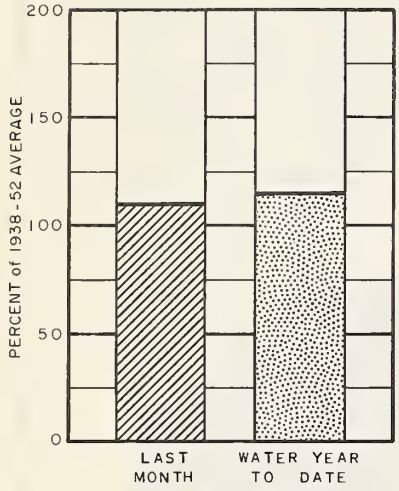
Owyhee Res. net inflow



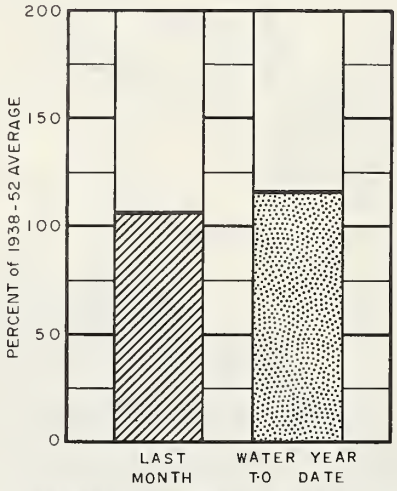
Umatilla near Umatilla



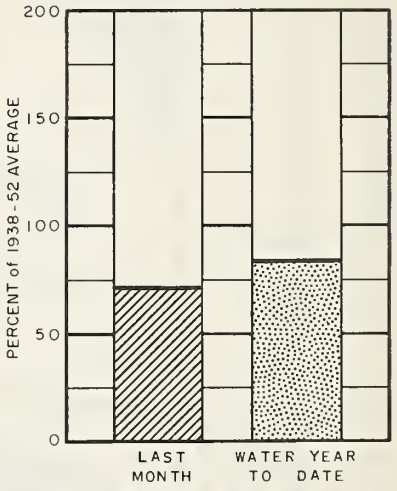
John Day at Service Creek



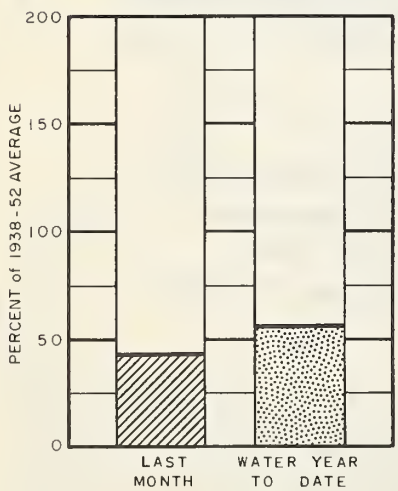
Deschutes at Moody



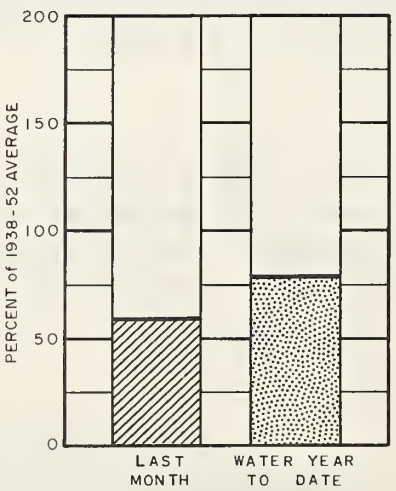
Hood and conduit near Hood River



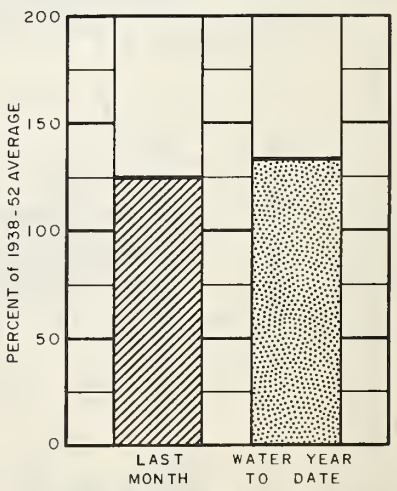
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



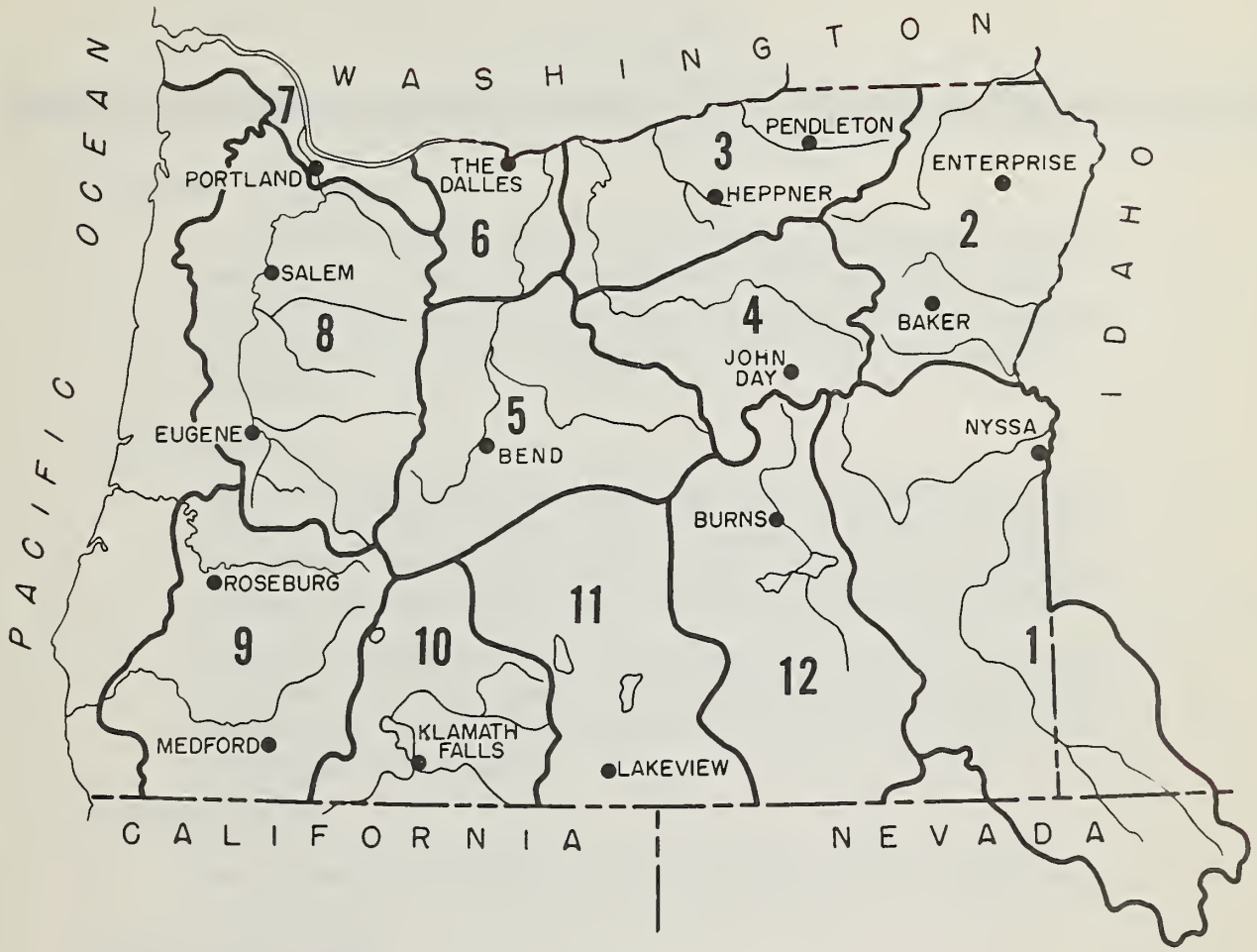
Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The California Oregon Power Co.; and North and South Boards of Control Owyhee Project.

Water year begins Oct. 1, 1958.

VALLEY PRECIPITATION in OREGON[a]

January 1, 1959



PRECIPITATION as PERCENT of the 1938-52 AVERAGE					
STATION	LAST MONTH	WATER YEAR TO DATE[b]	STATION	LAST MONTH	WATER YEAR TO DATE[b]
Baker Apt.	122	85	Lakeview	58	46
Bend	Report	delayed	Medford Apt.	71	50
Burns	47	48	Nyssa	68	39
Enterprise	162	42	Pendleton Apt.	166	100
Eugene Apt.	91	92	Portland Apt.	81	71
Heppner	Report	delayed	Roseburg Apt.	65	70
John Day[d]	Report	delayed	Salem Apt.	68	79
Klamath Falls Apt.	22	34	The Dalles	82	84

[a] *Preliminary data furnished by the U.S. Weather Bureau.* [b] *Oct. 1 to date.* [c] *Report delayed.*
[d] *As percent of Canyon City average.*

WATER SUPPLY OUTLOOK
OWYHEE, MALHEUR WATERSHEDS
OREGON

as of
January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The 1959 outlook for irrigation water supplies in Malheur County is poor for those lands dependent upon natural streamflow. Lands served by the four major irrigation reservoirs have a better outlook but are also dependent upon good streamflow the balance of the water year.

SNOW-COVER

There is practically no snow-pack this year. Normally, about 40 percent of the total winter "snow crop" should be on the ground by January 1. This year the "crop" is mostly missing. It is possible, although not likely, that future storms will make up the difference.

Again this year, a series of aerial snow depth gages will be observed from the air. These observations, made the last week of January, February and March, will add to the snow data normally provided by the regular snow surveys.

SOIL-MOISTURE

The soil mantle on Malheur County watersheds is only moderately well wetted.

RESERVOIRED WATER

An excellent carry over of water is provided in Owyhee and Warm-springs Reservoirs. Agency Valley is below average but already holds 19,000 acre feet.

STREAMFLOW

So far this water year the Owyhee* has discharged about 80 percent of normal. Malheur River has discharged amounts more nearly normal.

*Preliminary data from Owyhee Project-North Board of Control, Nyssa, Oregon

Report prepared by:
W. T. Frast and Manes Bartan
U. S. Department of Agriculture, Soil Conservation Service
209 S W Fifth Avenue, Portland, Oregon

USDA SCS PORTLAND ORE. 1959 M-1853-I

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

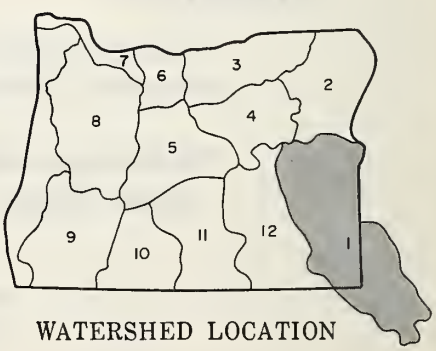
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Boulder Creek Bully Creek Cow Creek Jordan Creek Jordan Valley Irrigation District McDermitt Creek Oregon Canyon Creek Owyhee Project Sucker Creek Ten Mile Creek Vale, Oregon Irrigation District Warm Springs Irrigation District Willow Creek	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
1320	Malheur near Drewsey	d	April–Sept.	82	
139	Malheur North Fork at Beulah [e]	d	April – Sept.	64	
1234	Owyhee Reservoir net Inflow [h]	d d d	April – Sept. April – July March–July	458 440 570	

RESERVOIR STORAGE (1,000 Ac. Ft.)

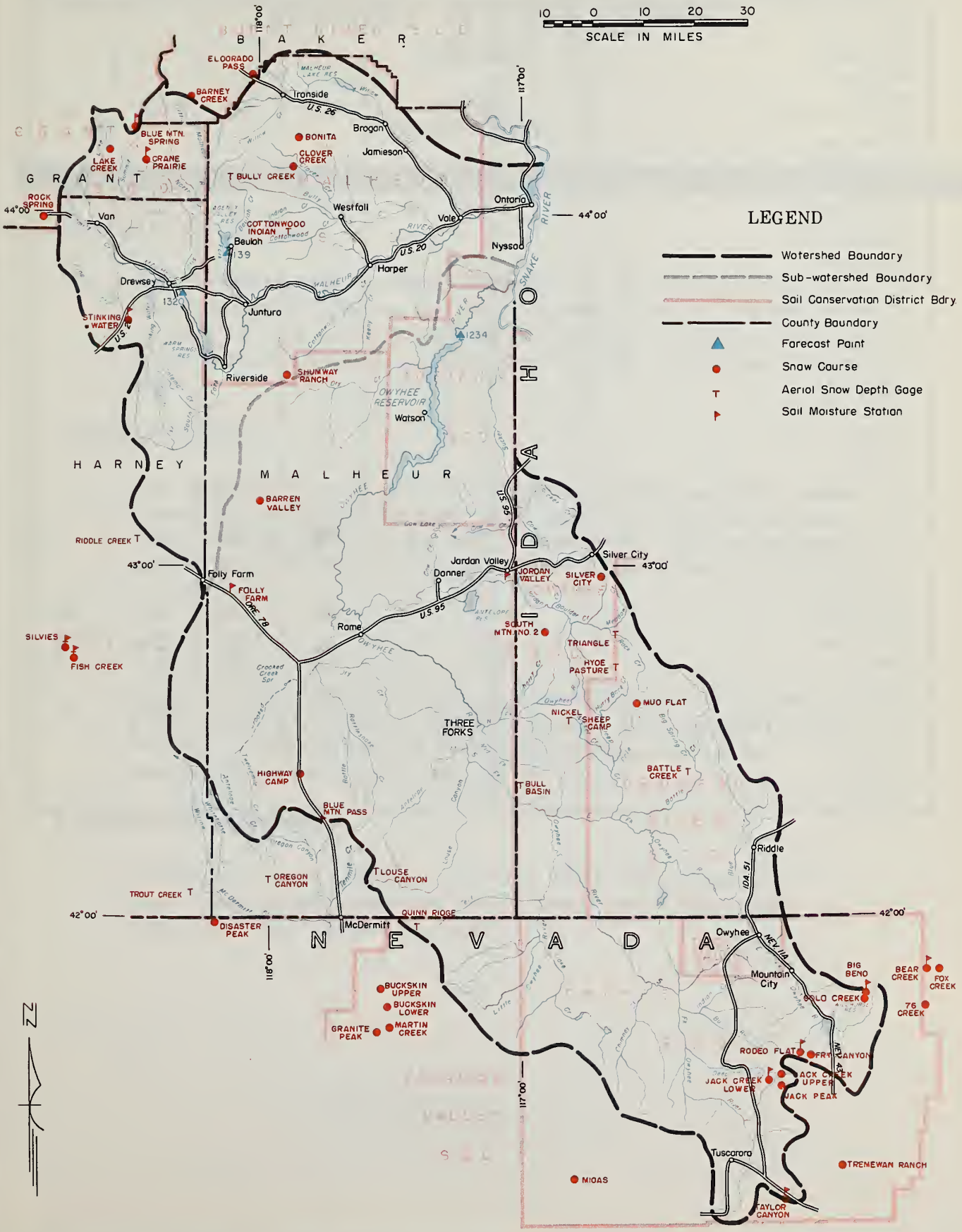
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Agency Valley	60.0	19.0	18.0	29.9
Antelope	36.5	No	Report	
Owyhee	715.0	466.3	445.5	419.0 [i]
Warm Springs	191.0	112.3	86.0	63.8



WATERSHED LOCATION

[a] Assuming normal meteorological conditions. [b] 1938 - '52, 15 year period. [c] Number of years in 1938 - '52 period. [d] Not scheduled. [e] Corrected to natural flow. [f] Aerial snow depth gage; water content estimated. [g] Report delayed. [h] USBR records of inflow. [i] 1938 excepted

OWYHEE, MALHEUR WATERSHEDS



SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Barney Creek	5950	d					
Barren Valley	4200	g					
Battle Creek[f]	5700	d					
Bear Creek	7800	g					
Big Bend	6700	g					
Blue Mountain Springs	5900	12-22	0	0.0	7.2	6.3	15
Banita	4600	d					
Buckskin, Lower	6700	g					
Buckskin, Upper	7200	g					
Bull Basin	5600	d					
Bully Creek	5300	d					
Clover Creek	4100	12-29	T	T	- -	- -	0
Cottonwood - Indian[f]	4320	d					
Crane Praire	5375	d					
Disaster Peak	6500	g					
Eldorado Pass	4600	12-29	6	1.3	0.1	- -	0
Fish Creek	7900	d					
Fox Creek	6800	g					
Fry Canyon	6700	g					
Gold Creek	6600	g					
Granite Peak	7800	g					
Highway Camp	4300	g					
Hyde Posture	5800	d					
Jack Creek, Lower	6800	g					
Jack Creek, Upper	7250	g					
Jack Peak	8420	g					
Lake Creek	5120	d					
Louse Canyon	6440	d					
Martin Creek	7200	g					
Midas	5700	g					
Mud Flat	5500	12-31	2	0.6	- -	- -	0
Nickel Sheep Camp[f]	5450	d					
Oregon Canyon	7240	d					
Quinn Ridge	6200	d					
Riddle Creek[f]	5800	d					
Rock Springs	5100	12-23	0	0.0	1.6	2.5	14
Rodeo Flat	6800	g					
Shumway Ranch	4500	12-22	0	0.0	- -	- -	0
Silver City	6400	1-1	7	1.5	8.2	6.6	6
Silvies	6900	d					
South Mountain No. 2	6340	g					
Stinking Water	4800	12-29	T	T	1.5	1.9	10
Taylor Canyon	6200	g					
Tremewan Ranch	5700	d					
Triangle	5150	d					
Trout Creek[f]	7800	d					
76 Creek	7100	g					

WATER SUPPLY OUTLOOK
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

April-September streamflow will be below average in northeastern Oregon unless unusually heavy snowfall occurs in the next 30-45 days. Those irrigators served from direct streamflow will notice the shortages the most.

SNOW-COVER

The mountain snow-pack in Baker, Union and Wallowa Counties is below normal with only 26 percent of last year and 36 percent normal. However, this area has more snow in proportion than any other area in the state.

SOIL-MOISTURE

Soils in the Tollgate area are well wetted. In the Blue Mountain Summit area the soils are moderately wetted. The mountain soil mantle appears to be wetter than last year this date.

RESERVOIR STORAGE

Latest available data indicates that Unity contains less than normal storage while Wallowa Lake contents are well above normal.

Report prepared by:
W. T. Frost and Manes Bartan
U. S Department of Agriculture, Soil Conservation Service
209 S W Fifth Avenue, Portland, Oregon

USDA SCS PORTLAND ORE. 1959 M-1853-2

7-S-20209-2-N

WATER SUPPLY OUTLOOK

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

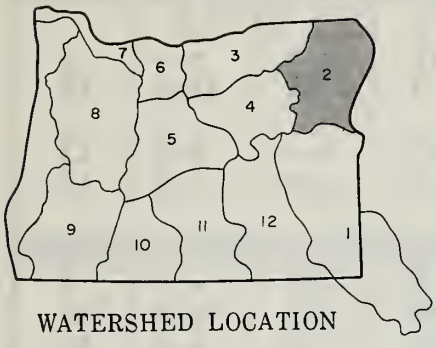
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Alder Slope Boker Volley Big Creek Clover Creek Cove Durkee Eagle Volley Elgin Enterprise – Joseph Hereford – Bridgeport Imnaha River LoGronde – Islond City Lostine – Wallowo North Powder River – Wolf Creek Pine Volley Powder River — Elk Creek Summerville Sumpter Volley Union – Hot Loke Unity	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
1815	Beor neor Wollowo	d	April–Sept.	69	
143	Burnt neor Hereford[e]	d	April–Sept.	42	
185	Catherine near Union	d	April–Sept.	71	
1816	Grande Ronde at LaGrande	d	April–Sept.	177	
1814	Hurricane near Joseph	d	April–Sept.	45	
172	Imnaha at Imnaha	d	April–Sept.	303	
1810	Lostine near Lostine	d	April–Sept.	124	
152	Powder neor Boker	d d	April–Sept. April–July	63 62	
1822	Wallowo East Fork neor Joseph[e]	d d	April–Sept. April–July	11.3 9.2	

[a] Assuming normal meteorological conditions [b] 1938 - '52, 15 year period. [c] Number of years in 1938 - '52 period [d] Not scheduled [e] Corrected to natural flow
[f] Aerial snow depth gage; water content estimated. [g] Report delayed. [h] 1938 excepted *October 31, 1958 **December 6, 1958

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



WATERSHED LOCATION

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Unity	25.2	2.4*	5.8	7.4 [h]
Wallowa Lake	40.9	29.1**	24.1	19.2

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
					WATER CONTENT (Inches)		
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	NORMAL [b]	YEARS OF [c] RECORD
Aneroid Lake No. 1	7480	d					
Aneroid Lake No. 2	7000	12-28	25	6.7	- -	- -	0
Anthony Lake	7125	12-23	15	4.9	13.4	11.4	13
Barney Creek	5950	d					
Beaver Reservoir	5340	12-31	6	1.5	- -	5.2	13
Blue Mountain Summit	5098	12-30	6	0.5	4.0	3.9	15
Bourne	5800	d					
Camp Carson	5970	d					
County Line	4800	12-30	4	0.8	3.3	- -	1
Dooley Mountain	5430	12-30	6	1.5	3.5	3.8	14
Eilertson Meadows	5400	12-27	10	1.5	7.8	4.1	10
Eldorado Pass	4600	12-29	6	1.3	0.1	- -	0
Gold Center	5340	d					
Goodrich Lake	6775	d					
Lucky Strike	5050	d					
Meacham	4300	12-23	0	0.0	4.9	- -	0
Moss Springs	5850	12-22	10	3.8	13.5	9.9	13
Schneider Meadows	5400	d					
Schoolmarm	4775	12-30	4	0.9	4.1	- -	2
Summit Springs	6000	d					
Taylor Green	5740	d					
Tipton	5100	12-29	9	1.3	6.3	- -	0
Tollgate	5070	12-23	5	2.4	13.1	- -	0

WATER SUPPLY OUTLOOK
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS
OREGON

as of

January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The water supply outlook for the Umatilla, Morrow and Gilliam Counties is only fair. Much more snow is needed to create a favorable situation; particularly for those irrigators served from streams without reservoirs.

SNOW-COVER

Water content of snow is low, with two of the three surveyed courses reported as zero. These were Emigrant Springs and Meacham measured on December 23. Tollgate as of that date had 2.4 inches of water or about 20 percent of last year.

SOIL-MOISTURE

Watershed soils are moderately well wetted. The melting of most of the November snowfall coupled with recent December rains have improved these moisture conditions.

RESERVOIR STORAGE

Cold Springs and McKay Reservoirs hold 13 percent more water than last year at this date. They are currently storing 93 percent of normal.

STREAMFLOW

Since October 1st the Umatilla River* has had a flow 107 percent of normal. Both November and December flow were above normal while October flow was below normal at 52 percent.

*Preliminary data from U.S. Geological Survey, Portland, Oregon

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USDA SCS PORTLAND OREG. 1957 M-1853-3

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Birch Creek Butter Creek Dry Creek Dugger Creek Johnson Creek McKay Creek Mill Creek Mud Creek Pine Creek Rhea Creek Rock Creek Umatilla River (Cold Springs Res.) Umatilla River, Main Umatilla River (McKay Res.) Walla Walla River, Little Walla Walla River, Main Walla Walla River, North Fork Walla Walla River, South Fork Willow Creek	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

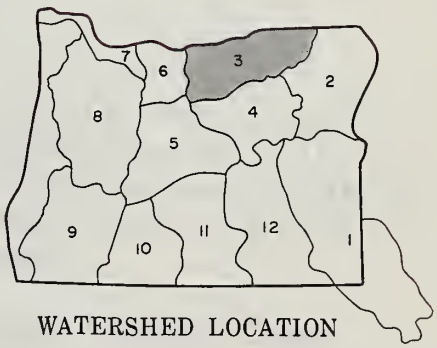
FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
2213	Mc Kay near Pilot Rock	d	April-Sept.	28	
		d	April-July	28	
2236	Umatilla near Gibbon	d	April-Sept.	87	
223	Umatilla at Pendleton	d	April-Sept.	167	
		d	April-July	155	
214	Walla Walla, South Fork near Milton	d	April-Sept.	71	
		d	April-July	58	

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Arbuckle Mountain	5400	d					
Battle Mountain Summit	4340	g					
Emigrant Springs	3925	12-23	0	0.0	4.0	0.0	0
Lucky Strike	5050	d					
Meacham	4300	12-23	0	0.0	4.9	- -	0
Pearson Creek	3000	d					
Tollgate	5050	12-23	5	2.4	13.1	- -	0

[a] *Assuming normal meteorological conditions.* [b] *1938 - '52, 15 yeor period.* [c] *Number of years in 1938 - '52 period.* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth goge; water content estimated.* [g] *Report delayed.*

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Soil Moisture Station

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Cold Springs	50.0	22.3	22.0	21.1
Mc Koy	74.0	22.9	18.1	27.6

WATER SUPPLY OUTLOOK
UPPER JOHN DAY WATERSHEDS
OREGON

as of
January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Water supplies this spring and summer in the Upper John Day watershed will be short unless the mountain snow pack improves markedly in the next 30-45 days.

SNOW-COVER

Water content of snow is only 21 percent of last year and 24 percent of average. Usually 38 percent of the total average winter's snow water accumulates by January 1st. By January 1 this year only 6 percent had accumulated.

SOIL-MOISTURE

Soils are moderately wet and are slightly wetter than last year at this date. The soil moisture penetration has been only fair in the Ukiah, Starr Ridge and Blue Mountain Summit areas.

STREAMFLOW

The John Day River* has been flowing near normal during the October through December period. It was above normal at 108 percent in October; slightly below normal at 86 percent in November; and just normal at 102 percent in December.

* Preliminary data from U.S. Geological Survey, Portland, Oregon

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USDA-SCS PORTLAND, OREG. 1959 M-1853-4

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Averoge" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Beech Creek Beech Creek-Fox-Long Creek Bridge-Mountain Creeks Comas Creek Cherry Creek Indian-Pine Creeks John Day River, Main Fork John Doy River, Mid. Fork John Day River, North Fork John Day River, South Fork Monument-Kimberly Strowberry Creek	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

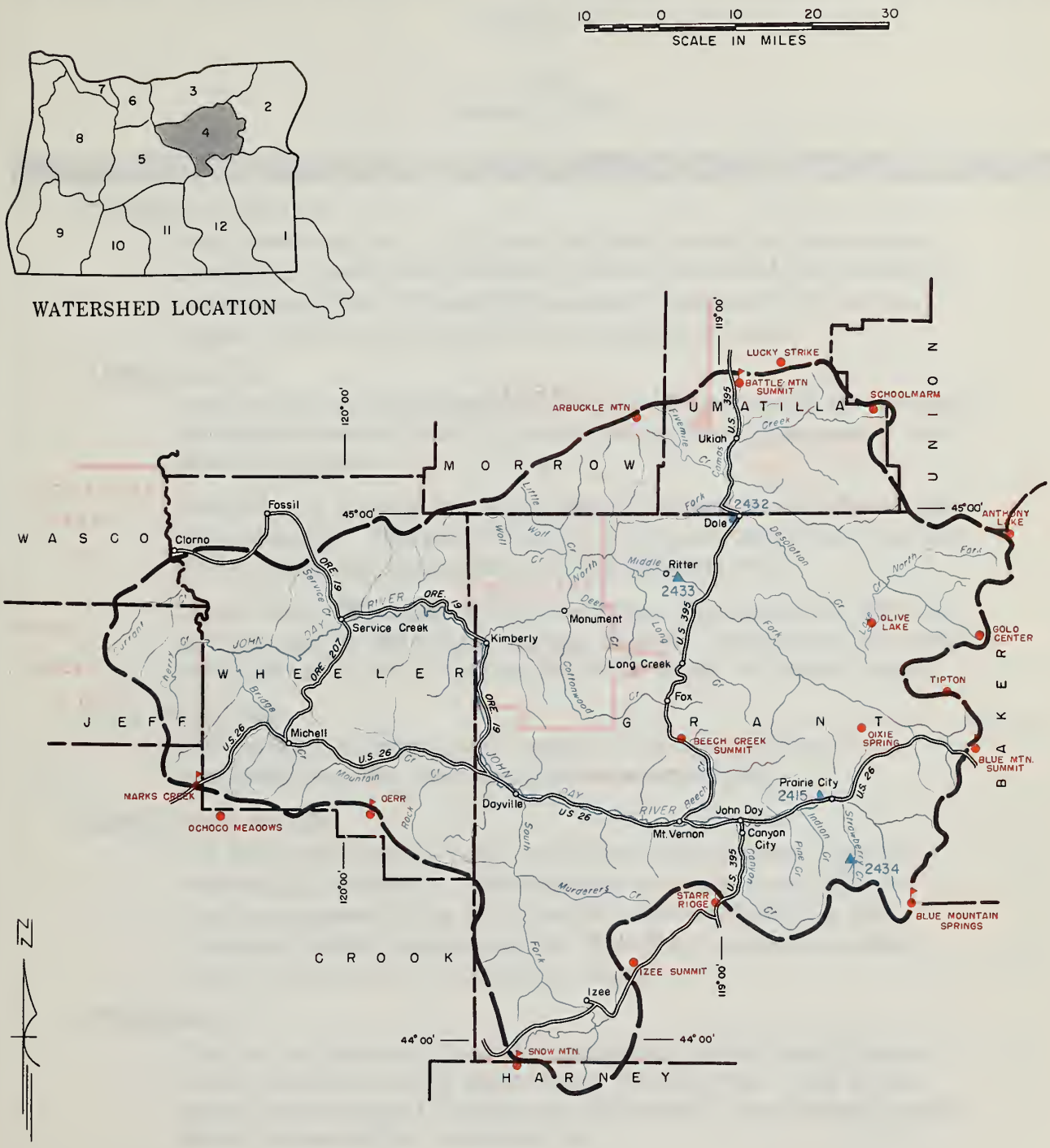
FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
2415	John Day ot Prairie City	d d	April-Sept. April-July	50 45	
2433	John Day, Mid. Fork at Ritter	d	April-Sept.	122	
2432	John Day, North Fork near Dale	d	April-Sept.	248	
2434	Strawberry neor Prairie City	d	April-Sept.	8.3	

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	NORMAL [b]	YEARS OF [c] RECORD
Anthony Lake	7125	12-23	15	4.9	13.4	11.4	13
Arbuckle Mountain	5400	d					
Battle Mountain Summit	4340	g					
Beech Creek Summit	4800	12-22	0	0.0	1.3	1.6	10
Blue Mountain Springs	5900	12-22	0	0.0	7.2	6.3	15
Blue Mountain Summit	5098	12-30	6	0.5	4.0	3.9	15
Derr	5670	d					
Dixie Springs	6650	d					
Gold Center	5340	d					
Izee Summit	5293	12-22	0	0.0	2.4	3.2	10
Lucky Strike	5050	d					
Marks Creek	4540	12-24	0	0.0	1.2	- -	0
Ochoco Meadows	5200	d					
Olive Lake	6000	12-29	14	3.1	10.0	7.4	15
Schoolmarm	4775	12-30	4	0.9	4.1	- -	2
Snow Mountain	6300	d					
Starr Ridge	5156	12-22	0	0.0	1.8	2.1	10
Tipton	5100	12-29	9	1.3	6.3	- -	0

[a] *Assuming normal meteoralogical conditions* [b] *1938-'52, 15 year period.* [c] *Number of years in 1938-'52 period* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth gage; water content estimated.* [g] *Report delayed.*

UPPER JOHN DAY WATERSHEDS



WATER SUPPLY OUTLOOK
UPPER DESCHUTES, CROOKED WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Short water supplies in 1959 seem indicated for all irrigated lands of Deschutes, Crooked and Jefferson Counties not served from the larger storage reservoirs. Although the mountain snow-pack is record low, storage in four major reservoirs is much above average.

SNOW-COVER

Snow surveys just completed establish new low records for water content. Present snow-cover is only 11 percent average and 15 percent of last year on this date.

Normally, by January 1st, 41 percent of the total winter's "snow crop" is accumulated. This year, however, we have received only 1 percent of the normal snow accumulation in the mid-state area.

There is only a slim chance that remaining winter storms will be able to "make up" for the present shortage of snow. In this area, the snow-pack is the principal controlling factor for spring and summer runoff.

SOIL-MOISTURE

Soils are only moderately well wetted in the upper portions of the watersheds where the snow-pack should be developing.

RESERVOIRED WATER

All four major reservoirs have much above normal water supplies in storage as of January 1. This important carryover is due both to good management and to the abundant water available last year. Abnormally warm temperatures this winter have caused mid-winter runoff rather than an accumulation of snow.

STREAMFLOW

Flow of the Deschutes River* has been above normal since October 1st due largely to heavy ground water contributions. Flow of this stream has averaged 114 percent of the normal. Flow of the Crooked River has been higher than usual also.

*From preliminary data by U.S. Geological Survey, Portland, Oregon

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USDA-SCS PORTLAND, OREG. 1-57 M-1853-5

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

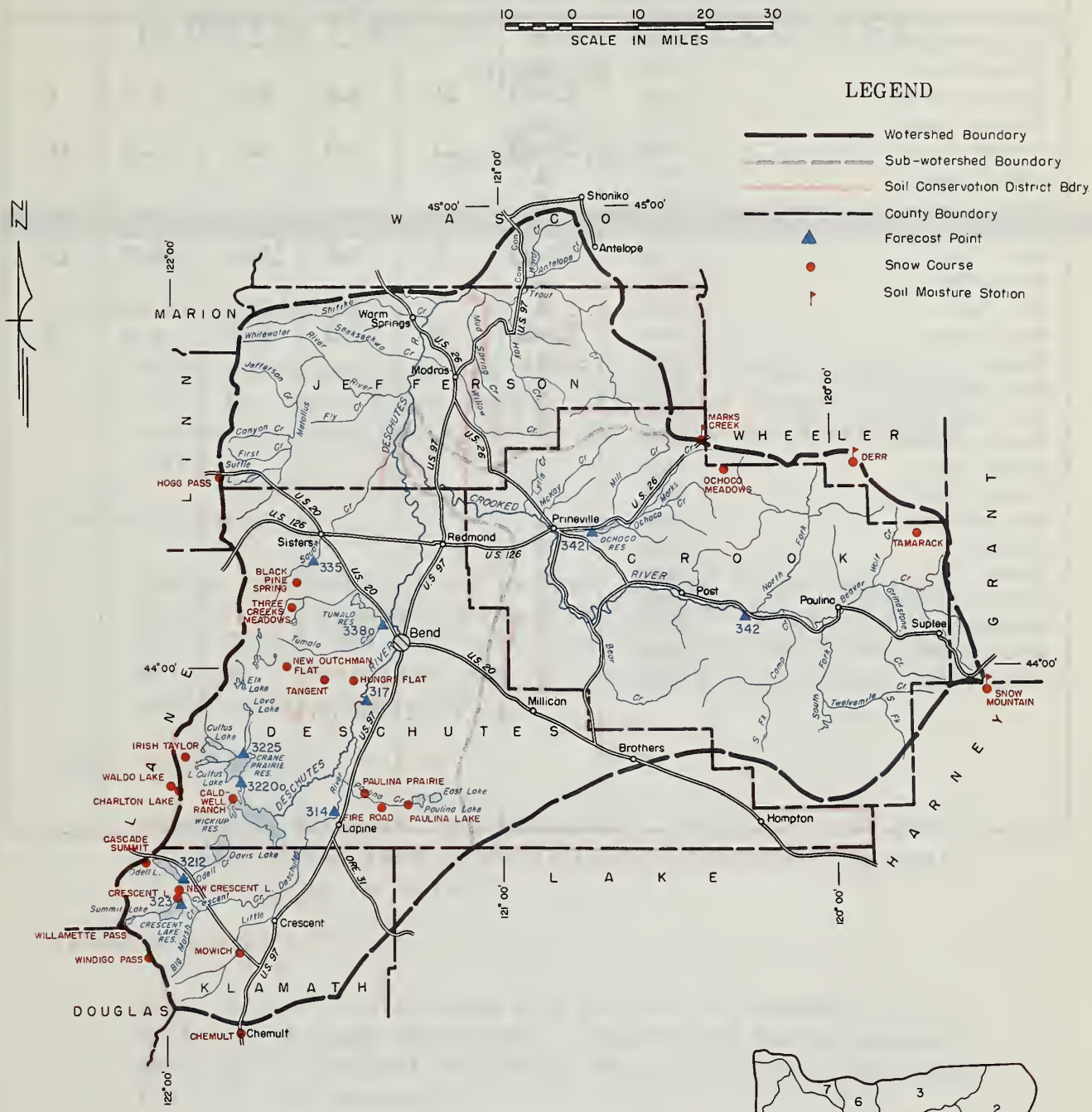
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Oregon Irrigation District Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrigation District Mill Creek North Unit Irrigation District Ochoco Creek Ochoco Irrigation District Sisters Irrigation District Snow Creek Irrigation District Squaw Creek Irrigation District Swalley Ditch Tumalo Project Walker Basin Irrigation District	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

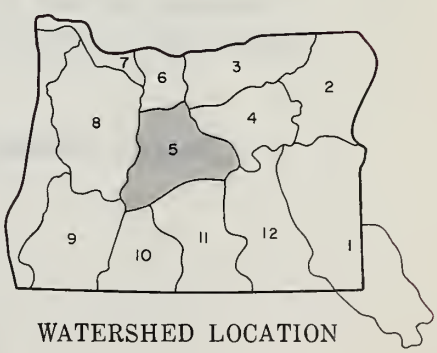
STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
3220A	Crane Prairie Reservoir net inflow	d	April - Sept.	121	
323	Crescent at Crescent Lake [e]	d	April - Sept.	21	
342	Crooked near Post	d	April - Sept.	124 [g]	
317	Deschutes at Benham Falls [e]	d	April - Sept.	511	
		d	April - July	346	
3225	Deschutes below Snow Creek	d	April - Sept.	60	
314	Deschutes, Little near Lapine [e]	d	April - Sept.	90	
		d	April - July	79	
3421	Ochoco Reservoir net inflow	d	April - Sept.	28	
3212	Odell near Crescent	d	April - Sept.	29	
335	Squaw near Sisters	d	April - Sept.	49	
338A	Tumalo near Bend [e]	d	April - Sept.	48	

[a] *Assuming normal meteorological conditions.* [b] *1938 - '52, 15 year period.* [c] *Number of years in 1938 - '52 period.* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth gage, water content estimated.* [g] *Report delayed.* [h] *1938 - '39 excepted.* [i] *1938 - '42 excepted.* *December 2, 1958

UPPER DESCHUTES, CROOKED WATERSHEDS





WATERSHED LOCATION

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Crane Prairie	55.3	42.9	46.2	27.6
Crescent Lake	80.0	55.0*	43.7	38.5
Ochoco	46.0	22.8	18.7	16.4
Wickiup	200.0	144.5	147.5	75.5[i]

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
					WATER CONTENT (Inches)		
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	LAST YEAR	NORMAL [b]	YEARS OF [c] RECORD
Black Pine Spring	4600	d					
Caldwell Ranch	4400	d					
Cascade Summit	4880	12-29	14	2.8	9.9	- -	4
Charlton Lake	5750	d					
Chemult	4760	12-28	11	1.9	4.4	4.5	14
Crescent Lake	4760	d					
Derr	5670	d					
Fire Road	5050	d					
Hogg Pass	4755	12-23	2	0.6	19.4	18.0	11
Hungry Flat	4400	d					
Irish-Taylor	5500	d					
Marks Creek	4540	12-24	0	0.0	1.2	- -	0
Mowich	4700	d					
New Crescent Lake	4800	d					
New Dutchman Flat	6400	d					
Ochoco Meadows	5200	d					
Paulina Lake	6330	d					
Paulina Prairie	4285	d					
Snow Mountain	6300	d					
Tamarack	4800	d					
Tangent	5400	d					
Three Creeks Meadows	5600	d					
Waldo Lake	5500	d					
Willamette Pass	5600	d					
Windigo Pass	5800	d					

WATER SUPPLY OUTLOOK
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Poor water supplies are anticipated in April-September 1959 for Hood River Valley and Wasco County lands unless striking increases occur in the mountain snow pack.

SNOW-COVER

Water content of snow is low. Phlox Point had only 4.9 inches of water compared to an average of 23.0. Still Creek had 2.0 inches while Clear Lake had but a trace. Some snow has fallen since the surveys were made on December 29.

SOIL-MOISTURE

Mountain soils are satisfactorily wetted; due in part to rain rather than snow at the high elevations most of the season to date.

STREAMFLOW

Hood River* has flowed 115 percent of normal during October through December. October's below normal flow of 73 percent was more than offset by a November flow of 153 percent.

*Preliminary data from U.S. Geological Survey, Portland, Oregon

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USDA-SCS-PORTLAND, OREG. 1959 M-1853-6

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Aldridge Ditch Badger Creek Dee Irrigation District East Fork Irrigation District Farmers Irrigation District Glacier Irrigation District Hood River Irrigation District Juniper Flat Middle Fork Irrigation District Mile Creeks Mill Creek Mount Hood Irrigation District Rock-Gate-Threemile Creeks Tygh Creek White River	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
437	Hood near Hood River [e]	d	April-Sept.	306	
		d	April-July	260	
438	Hood, West Fork near Dee	d	April-Sept.	147	
		d	April-July	127	
3613	White below Tygh Valley	d	April-Sept.	152	
		d	April-July	135	

SNOW

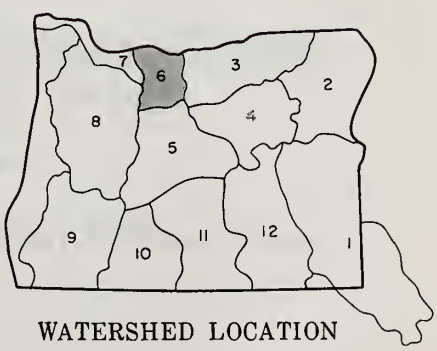
SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Brooks Meadows	4300	d					
Clear Lake	3800	12-28	T	T	4.5	- -	0
Greenpoint Reservoir	3400	d					
Phlox Point	5600	12-29	15	4.9	30.7	23.0	13
Red Hill	4400	d					
Still Creek	3700	12-29	4	2.0	8.5	8.4	12
Tilly Jane	6000	d					

[a] *Assuming normal meteorological conditions* [b] *1938 - '52, 15 year period.* [c] *Number of years in 1938 - '52 period* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth gage; water content estimated.* [g] *Report delayed.*

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course



WATERSHED LOCATION

WATER SUPPLY OUTLOOK
LOWER COLUMBIA WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The 1959 outlook, at this early-winter date, for the spring and summer flow of the Columbia River is definitely below normal.

SNOW-COVER

The few key snow courses measured near the 1st of January in the United States portion of the Columbia Basin indicate slightly below normal snowfall in the northern half and much below normal throughout the southern half.

Canadian snow-cover is probably near normal in water content.

SOIL-MOISTURE

Relatively dry soils beneath the snow-pack throughout the entire basin will reduce runoff from the snow-pack that does develop.

The combination of dry soil and light snow-pack indicates that 1959 could be a low water supply year unless the general trend of storms changes during the winter to more favorable conditions.

STREAMFLOW

Flow* of the Columbia River as measured near The Dalles has been above normal so far this water year as shown below:

Month	Percent of Normal Discharge (1938-52)
October	101 adjusted for storage
November	121 " " "
December	124 not adjusted

*From preliminary data furnished by U.S. Geological Survey, Portland, Oregon

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USDA SCS PORTLAND OREG. 1959 M-1853-7

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
Columbia at The Dalles	d	Apr.-Sept.	97,000	
	d	Apr.-June	65,900	
	d	May-June	51,800	

HISTORICAL DATA (Columbia River at The Dalles)

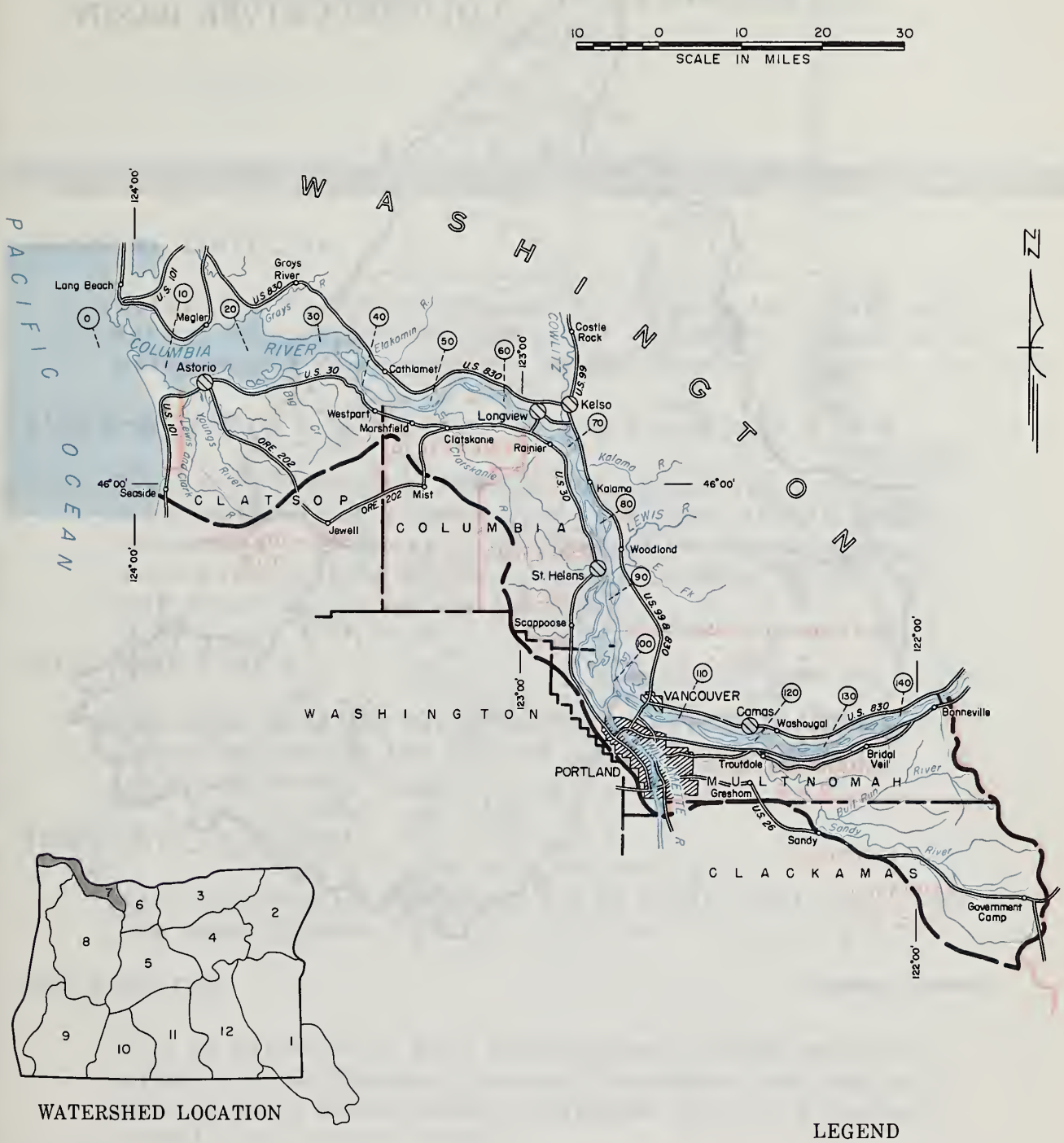
YEAR	STREAMFLOW [c] (1,000 A.F.)			PEAK [e] (1,000 C.F.S.)	DATE
	APR.-SEPT.	APR.-JUNE	MAY-JUNE		
1938	103,400	72,600	56,700	605	May 31
1939	80,800	53,300	40,500	387	May 21
1940	77,400	52,100	38,900	369	June 5
1941	69,100	43,500	33,500	272	June 11
1942	90,300	58,100	44,500	428	June 18
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,500	54,600	47,300	505	June 8
1946	108,000	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,600	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1938-52 Avg.	97,000	65,900	51,800	538	
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,200	97,100	75,800	815	June 3
1957	115,200	79,200	67,200	700	May 22
1958	97,696	71,953	58,644	593	May 31

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria) [f]

VANCOUVER [g] GAGE (WEATHER BU.)	FLOW AT THE DALLES (1000 cfs)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE IS.	SCAPPOOSE	DEER IS.	RAINIER	BEAVER	WOODSON
		RIVER MI.						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35	1,290	42.2	35.3	34.4	29.6	22.9	18.3	16.2
34 (1894)	1,220	41.3	34.4	33.4	28.5	22.0	17.5	15.5
33	1,150	40.4	33.3	32.3	27.5	21.0	16.7	14.8
32	1,090	39.5	32.2	31.2	26.5	20.0	15.9	14.1
31	1,030	38.5	31.2	30.1	25.5	19.1	15.1	13.4
30 (1948)	970	37.4	30.1	29.0	24.6	18.3	14.4	12.7
29 (1876)	920	36.2	29.1	28.1	23.9	17.7	13.8	12.1
28	870	35.1	28.1	27.3	23.3	17.2	13.3	11.6
27	820	33.8	27.1	26.4	22.4	16.6	12.8	11.2
26 (1933)	770	32.5	26.1	25.3	21.4	15.8	12.3	10.8
25 (1950)	730	31.8	25.1	24.1	20.4	15.1	11.9	10.5
24 (1957)	690	30.3	24.0	23.0	19.5	14.5	11.6	10.3
23	650	29.5	22.9	21.9	18.7	13.9	11.3	10.1
22 (1953)	610	28.6	21.9	20.8	17.6	13.3	11.0	9.9
21	570	27.6	21.0	19.8	16.6	12.7	10.7	9.7
20	540	26.5	20.1	18.9	15.7	12.2	10.3	9.5
19	510	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	480	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	450	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	430	22.4	16.5	15.5	13.0	10.5	9.3	8.7
15	400	21.4	15.5	14.4	12.0	9.8	8.8	8.3

[a] Assuming normal meteorological conditions. [b] 1938-'52, 15 year period. [c] Observed flow corrected for storage in F.D.R., Kootenai, Pend Oreille, Flathead, Hungry Horse, Lake Chelan, Coeur d'Alene and Grand Coulee Equalizer. [d] Not scheduled. [e] Observed peak

LOWER COLUMBIA WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles

[f] Based on Corps of Engineers automatic water stage recorder data.
[g] Vancouver Weather Bureau gage zero is 2.64' above M.S.L. All other readings are in feet above M.S.L.

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
WILLAMETTE WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Unless the mountain snow-pack increases in a much above normal fashion during the rest of the winter a poor to fair water supply is anticipated for the coming irrigation season.

SNOW-COVER

The water content of the limited snow-pack is low. This snow-pack is but 8 percent of last years and 10 percent of average. Whereas 38 percent of the total winter's snow-pack usually accumulates by January 1; this year only 4 percent is on the ground.

SOIL-MOISTURE

Mountain soils are fairly well primed. Rains at higher elevations during the past 60 days have brought this condition about.

RESERVOIR STORAGE

Multiple purpose reservoirs are at their usual levels for this time of year.

STREAMFLOW

Flow of the Middle Fork Willamette* was 85 percent normal during October through December with the only above normal month being November when 112 percent normal flow was recorded.

*Preliminary data from U.S. Geological Survey, Portland, Oregon

Report prepared by
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U. S Department of Agriculture, Soil Conservation Service
209 S W Fifth Avenue, Portland, Oregon

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WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

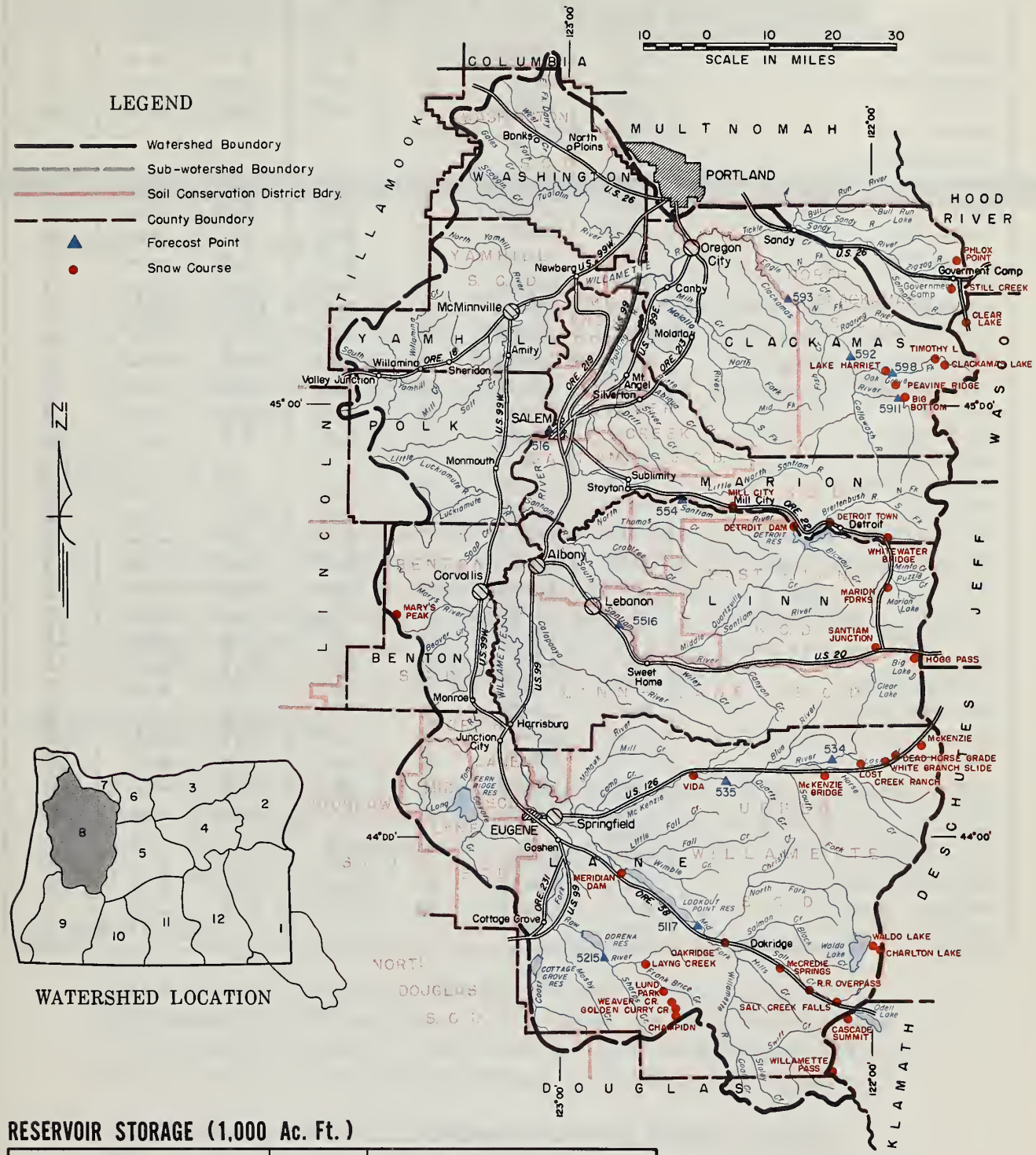
STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Calapooya Clackamas McKenzie Mollalla Santiam, North Santiam, South Willamette, Coast Fork Willamette, Middle Fork	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [c] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
5911	Clackamas at Big Bottom	d	April-Sept.	164	
		d	April-July	133	
593	Clackamas near Cazadero	d	April-Sept.	777	
		d	April-July	669	
592	Clackamas above Three Lynx	d	April-Sept.	599	
		d	April-July	507	
534	McKenzie at Mckenzie Bridge	d	April-Sept.	565	
		d	April-July	430	
535	McKenzie near Vida	d	April-Sept.	1195	
		d	April-July	978	
598	Oak Grove Fork above Power Intake	d	April-Sept.	186	
		d	April-July	145	
5215	Row near Dorena	d	April-Sept.	101	
		d	April-July	96	
554	Santiam, North at Mehama [e]	d	April-Sept.	842	
		d	April-July	748	
5516	Santiam, South at Waterloo	d	April-Sept.	558	
		d	April-July	525	
5117	Willamette, Mid. Fork below North Fork near Oakridge	d	April-Sept.	798	
		d	April-July	705	
516	Willamette at Salem	d	April-Sept.	4355	
		d	April-July	3863	

[a] Assuming normal meteorological conditions. [b] 1938-'52, 15 year period. [c] Number of years in 1938-'52 period. [d] Not scheduled. [e] Corrected to natural flow.
[f] Aerial snow depth gage; water content estimated. [g] Report delayed. [h] 1938-'42 excepted. [i] 1938-'43 excepted.

WILLAMETTE WATERSHEDS



RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Cottage Grove	30.0*	0.1	2.7	0.5 [h]
Detroit	299.9*	12.1	95.0	- -
Dorena	70.5*	1.3	31.9	- -
Fern Ridge	94.2*	0.3	34.3	4.5 [i]
Lookout Point	337.2*	6.3	134.8	- -

* *Multiple purpose reservoir-spoce reserved primorily for flood runoff.*

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)		YEARS OF [c] RECORD
NAME	ELEVATION				LAST YEAR	NORMAL [b]	
Big Bottom	2118	12-28	0	0.0	- -	- -	2
Cascade Summit	4880	12-29	14	2.8	9.9	- -	4
Champion	4500	12-24	0	0.0	12.6	- -	4
Charlton Lake	5750	d					
Clackamas Lake	3400	d					
Clear Lake	3800	12-28	T	T	4.5	- -	0
Dead Horse Grade	3800	12-31	0	0.0	8.3	- -	2
Detroit Town	1600	12-23	0	0.0	T	- -	2
Detroit Dam	1580	12-23	0	0.0	0.0	- -	2
Golden Curry Creek	3136	12-24	0	0.0	2.2	- -	3
Hogg Pass	4755	12-23	2	0.6	19.4	18.0	11
Lake Harriet	3400	12-28	0	0.0	- -	- -	2
Layng Creek	1200	12-24	0	0.0	0.0	- -	3
Lost Creek Ranch	1746	12-31	0	0.0	2.0	- -	1
Lund Park	1740	12-24	0	0.0	0.0	- -	3
Marion Forks	2730	12-22	0	0.0	7.7	5.5	11
Marys Peak	3620	d					
McCredie Springs	2120	12-29	0	0.0	T	- -	3
McKenzie	4800	12-31	11	3.4	27.2	- -	2
McKenzie Bridge	1372	12-31	0	0.0	0.0	- -	2
Meridian Dam	750	12-29	0	0.0	0.0	- -	3
Mill City	826	12-23	0	0.0	0.0	- -	1
Oakridge	1310	12-29	0	0.0	0.0	- -	3
Peavine Ridge	3500	12-28	T	T	9.4	6.3	15
Phlox Point	5600	12-29	15	4.9	30.7	23.0	13
Railroad Overpass	2750	12-29	0	0.0	T	- -	3
Salt Creek Falls	4000	12-29	T	T	3.8	- -	3
Santiam Junction	3990	12-23	0	0.0	10.7	10.3	11
Still Creek	3700	12-29	4	2.0	8.5	8.4	12
Timothy Lake	3295	12-28	T	T	8.4	- -	0
Vido	800	12-31	0	0.0	0.0	- -	0
Waldo Lake	5500	d					
Weaver Creek	2440	12-24	0	0.0	T	- -	2
White Branch Slide	2800	12-31	0	0.0	3.3	- -	2
Whitewater Bridge	2175	12-23	0	0.0	2.7	- -	3
Willamette Pass	5600	d					

WATER SUPPLY OUTLOOK
ROGUE, UMPQUA WATERSHEDS
OREGON

as of
January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Streamflow will be low in the Rogue-Umpqua this coming April-September unless storms during the rest of the winter begin producing heavy snowfall. Irrigators served from direct streamflow will be affected the most. Reservoir storage is good.

SNOW-COVER

Snow course measurements indicate one of the lowest January 1st readings on record. Rogue-Umpqua snow courses are only 16 percent of the January 1 normal water content. In a normal year, 37 percent of the mountain snow-pack is on the ground by January 1. This year only 4 percent has accumulated.

RESERVOIR STORAGE

Fish Lake, Fourmile Lake and Hyatt Prairie hold well above average water supplies amounting to 250 percent normal. Emigrant is nearly empty for construction purposes.

STREAMFLOW

Flow of the Rogue at Raygold* was below normal in December at 58 percent. Its flow since October was 78 percent normal. The flow of the Umpqua at Elkton for October through December was 56 percent normal.

*Preliminary data from U.S. Geological Survey, Portland, Oregon

Report prepared by
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WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Althouse Creek			Forecasts begin in the February 1 report which will reach you about February 9, 1959
Applegate River, Big			
Applegate River, Little			
Ashland Creek			
Butte Creek, Little			
Cow Creek			
Deer Creek			
Eagle Point Irrigation District			
Elk Creek			
Emigrant Creek (above Reservoir)			
Evans Creek			
Gold Hill Irrigation District			
Grants Pass Irrigation District			
Grave Creek			
Illinois River, East Fork			
Illinois River, West Fork			
Medford Irrigation District			
Neil Creek			
Red Blanket Creek			
Rogue River			
Rogue River Valley Irrigation District			
Sucker Creek			
Table Rock Irrigation District			
Talent Irrigation District			
Thompson Creek			
Wagner Creek			
Williams Creek			

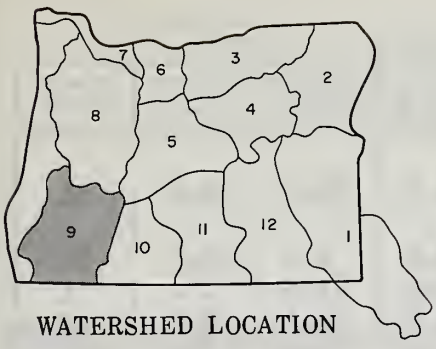
STREAMFLOW FORECASTS [c] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
7294	Applegate near Copper	d	April–Sept.	116[h]	
7420A	Clearwater above Trap Creek[e]	d	April–Sept.	64	
8321	Fourmile Lake net inflow[e]	d	April–Sept.	7.0	
8320	Hyatt Reservoir net inflow[e]	d	April–Sept.	6.0	
712	Illinois River near Kerby[e]	d	April–Sept.	181	
7230	Little Butte, North Fork below Fish Lake[e]	d	April–Sept.	14.9	
722	Rogue above Prospect	d	April–Sept.	316	
		d	April–July	265	
7217	Rogue, Middle Fork near Prospect[e]	d	April–Sept.	74	
		d	April–July	58	
7282	Rogue, South Fork near Prospect[e]	d	April–Sept.	76	
		d	April–July	65	
7277	Rogue below South Fork	d	April–Sept.	680	
		d	April–July	553	
724	Rogue at Raygold near Central Point	d	April–Sept.	905	
		d	April–July	760	
7292	Rogue at Grants Pass	d	April–Sept.	852	
7419	Umpqua, North Fork below Lake Creek[e]	d	April–Sept.	164	

[a] *Assuming normal meteorological conditions.* [b] *1938-'52, 15 year period.* [c] *Number of years in 1938-'52 period.* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth gage; water content estimated.* [g] *Report delayed.* [h] *1938-'39 excepted.*

* Nov. 11, 1958

ROGUE, UMPQUA WATERSHEDS



WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Emigrant Gap	8.3	0.2	4.6	4.0
Fish Lake	7.8	7.2	4.9	4.0
Fourmile Lake	16.1	12.2*	6.2	6.2
Hyatt Prairie	16.1	11.4	7.7	4.1

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Althouse	4530	d					
Annie Spring	6018	12-24	5	0.7	22.3	16.6	11
Big Red Mountain	6500	d					
Billie Creek Divide	5300	12-29	13	2.0	- -	10.0	11
Champion	4500	12-24	0	0.0	12.6	- -	4
Diamond Lake	5315	12-30	12	2.8	11.4	8.7	15
Fish Lake	4865	12-26	T	T	6.2	5.7	12
Fourmile Lake	6000	d					
Grayback Peak	6000	d					
Hazel View	2500	d					
Hobart Lake	5010	12-27	6	- -	- -	- -	3
Hyatt Prairie Reservoir	4900	12-27	9	- -	3.3	3.7	13
Little Red Mountain	6500	d					
North Umpqua	4215	12-24	T	T	9.4	- -	0
Oregon Caves	4000	d					
Page Mountain	4045	d					
Park Headquarters	6450	12-24	11	3.4	32.3	23.7	7
Scragg Mountain	6200	d					
Seven Lakes No. 1	6800	d					
Seven Lakes No. 2	6200	d					
Silver Burn	3720	12-29	8	1.5	7.0	3.8	15
Siskiyou Summit	4630	12-28	8	1.2	2.8	3.1	13
South Fork Canal	3500	12-29	T	T	1.9	1.2	14
Trap Creek	3800	12-24	0	0.0	6.3	- -	0
Wagner Butte	6900	d					
Whaleback	5140	d					
Windigo Pass	5800	d					

WATER SUPPLY OUTLOOK
KLAMATH WATERSHEDS
OREGON

as of
January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

Streamflow in Klamath Basin will be below average in the Klamath Basin this summer unless marked increases occur in the mountain snow-pack. Ground water contributions particularly in the Upper Klamath Lake basin will offset this condition to some extent in that area. Reservoired water supplies are much above normal.

SNOW-COVER

Present snow-cover is 21 percent of normal and 16 percent of last year. Only 5 percent of the normal winter snow-pack has accumulated whereas usually 38 percent is on the ground by January 1.

RESERVOIR STORAGE

Upper Klamath Lake and Clear Lake are two-thirds full; while Gerber is almost one-half full. The three reservoirs are 142 percent of the 1938-52 normal.

SOIL-MOISTURE

Mountain soils are moderately wetted.

STREAMFLOW

Inflow into Upper Klamath Lake* continues above normal with an October through December flow of 134 normal.

*Preliminary data from California-Oregon Power Company, Medford, Oregon

Report prepared by
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WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Reservoir) Sprague River Upper Klamath Lake Williamson River	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
823	Clear Lake Reservoir net inflow [h]	d d	April - Sept. March-July	49 86	
8215	Gerber Reservoir net inflow [h]	d d	April - Sept. March-July	24 42	
8421	Sprague near Chiloquin	d	April - Sept.	253	
832	Upper Klamath Lake net inflow [h]	d d	April-Sept. April-July	526 424	
8419	Williamson below Sprague River	d d	April-Sept. April-July	406 340	

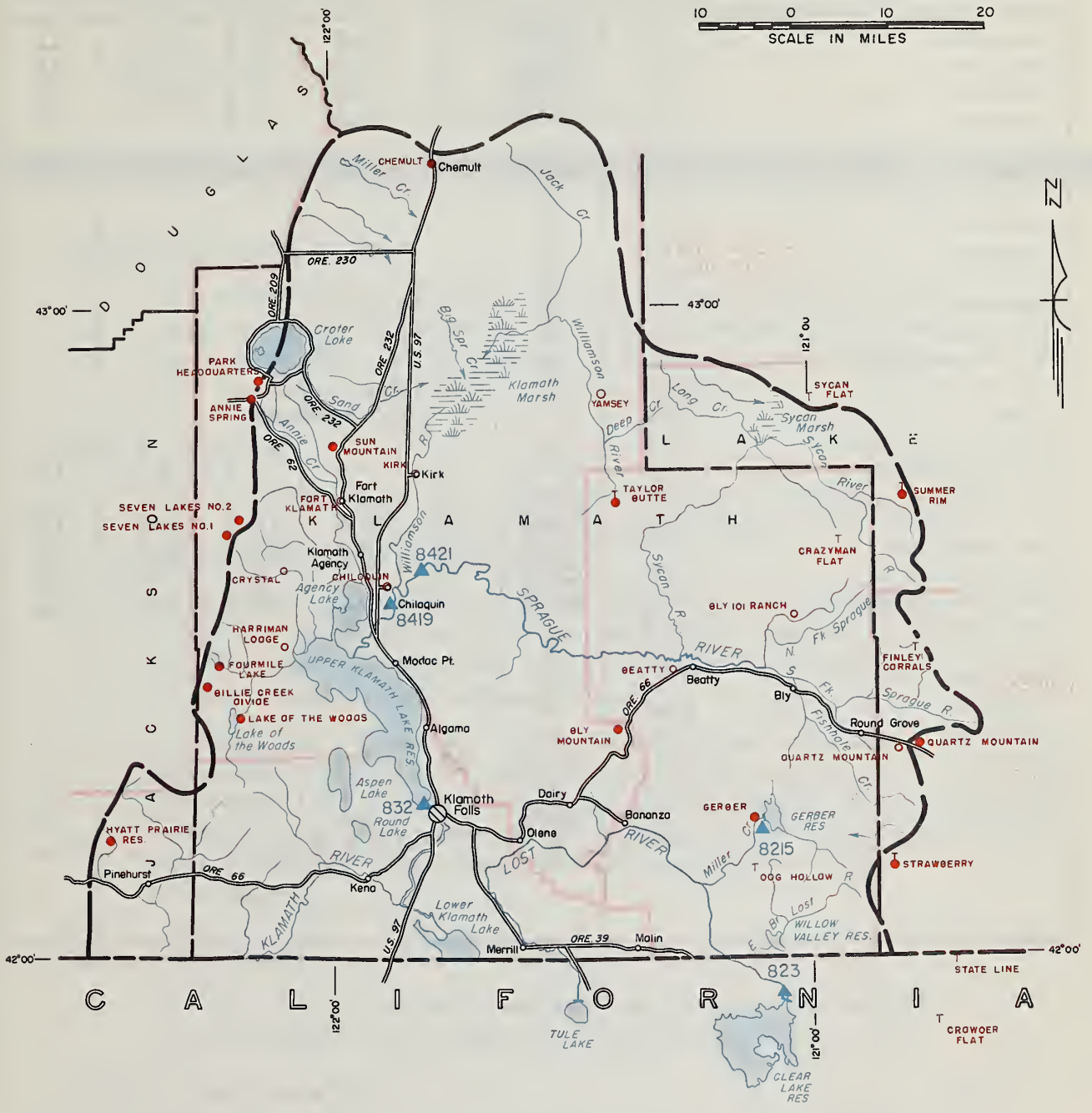
RESERVOIR STORAGE (1,000 Ac. Ft.)

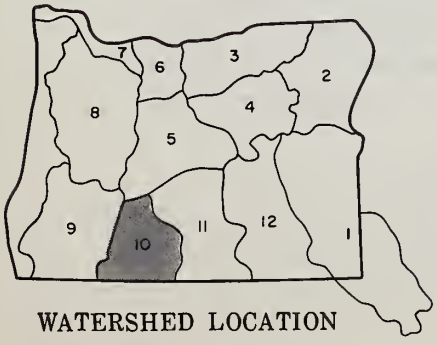
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Clear Lake	440.2 [i]	284.0	301.3	182.0 [j]
Gerber	94.0	44.2	57.6	31.6 [j]
Upper Klamath Lake	584.0	397.7	387.6	299.4

[a] *Assuming normal meteorological conditions.* [b] *1938 - '52, 15 year period.* [c] *Number of years in 1938 - '52 period.* [d] *Not scheduled.* [e] *Corrected to natural flow.*
[f] *Aerial snow depth gage; water content estimated.* [g] *Report delayed.* [h] *From COPCO or USBR records of inflow* [i] *Flashboards increase capacity to 513.0.*

[j] *1938 excepted*

KLAMATH WATERSHEDS





WATERSHED LOCATION

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- T Aeriol Snow Depth Gage
- COPCO Snow Station

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD		
NAME	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches) LAST YEAR	WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Annie Spring	6018	12-24	5	0.7	22.3	16.6	11
Beatty (Capco)	4300	12-31	0	0.0	0.5	0.2	15
Billie Creek Divide	5300	12-29	13	2.0	- -	10.0	11
Bly Mountain	5090	12-30	4	0.9	3.3	- -	0
Bly 101 Ranch (Copco)	4800	g					
Chemult	4760	12-28	11	1.9	4.4	4.5	14
Chiloquin (Capco)	4187	g					
Crazyman Flat [f]	6100	d					
Crowder Flat [f]	5200	d					
Crystal (Capco)	4200	g					
Dog Hallow [f]	4900	d					
Finley Corrals [f]	6000	d					
Fort Klamath (Capco)	4150	g					
Fourmile Lake	6000	d					
Gerber	4850	Not surveyed					
Harriman Lodge (Capco)	4200	g					
Hyatt Prairie Reservoir	4900	12-27	9	- -	3.3	3.7	13
Kirk (Copco)	4533	g					
Lake of the Woods	4960	12-28	8	1.7	8.3	3.8	15
Park Headquarters	6450	12-24	11	3.4	32.3	23.7	7
Quartz Mountain	5320	12-31	5	1.1	2.4	2.9	13
Quartz Mountain (Copco)	5504	12-31	5	1.4	3.2	3.1	14
Seven Lakes No. 1	6800	d					
Seven Lakes No. 2	6200	d					
State Line [f]	5750	d					
Strawberry	5600	d					
Summer Rim	7200	d					
Sun Mountain	5350	12-29	17	3.1	14.1	11.1	13
Sycan Flat [f]	5500	d					
Taylor Butte	5100	12-29	5	1.4	- -	- -	0
Yamsey (Capco)	4600	g					

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK
LAKE COUNTY, GOOSE LAKE WATERSHEDS
OREGON

as of
January 1, 1959

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The 1959 water supply outlook at this early-winter date for Lake County is not good. However, stored water supplies in Drews Reservoir are a little above the average and soils are well wetted.

SNOW-COVER

Water content of the present snow-pack is less than half of the January 1 average and about half of the amount on hand a year ago.

As a rule, about half of the normal winter "snow crop" is accumulated by January 1st. However, the present snow-cover is equal to only 20 percent of the usual snow accumulation.

A series of 15 aerial snow depth gages will be observed from the air again this year during the last weeks of January, February and March. These observations, coupled with regular snow surveys will provide added data for the analysis of the snow-pack.

SOIL-MOISTURE

Valley lands are well wetted while the soil mantle in the higher snow-pack is moderately wet.

RESERVOIRED WATER

Storage has not begun in Cottonwood yet but Drews Valley Reservoir holds 35,000 acre feet now which is a little more than the 32,200 acre feet in storage a year ago.

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WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Average" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Chewaucan River Crooked Creek Deep Creek Dry Creek East Side Goose Lake Guano Lake Honey Creek Lakeview Water Users Association Rock Creek Silver - Buck Creeks Summer Lake Thomas Creek Twentymile Creek Warner Lakes			**Forecasts begin in the February 1 report which will reach you about February 9, 1959**

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

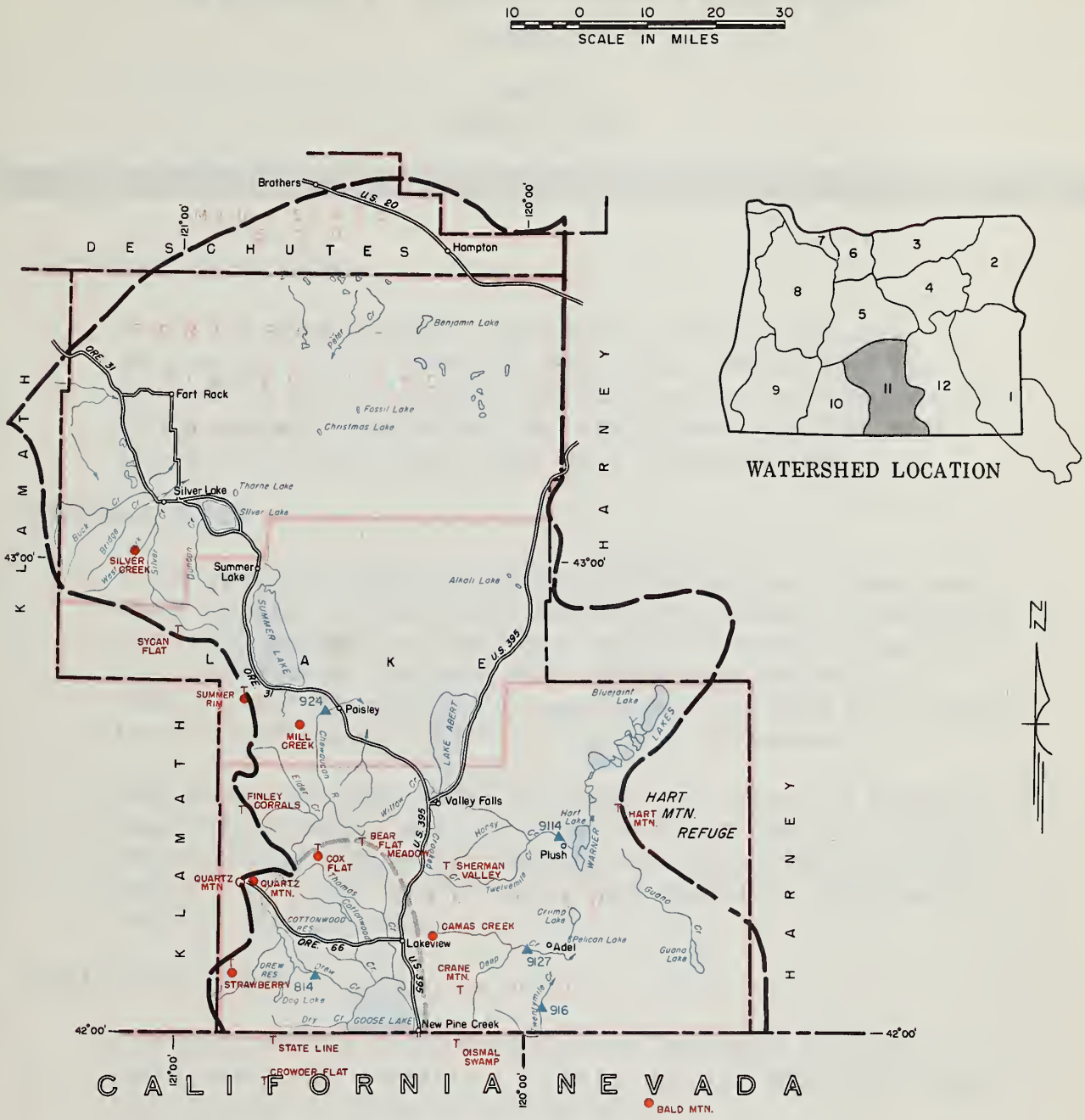
FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
924	Chewaucan near Paisley	d	April — June	73	
9127	Deep above Adel	d	April — June	67	
814	Drew Reservoir net inflow	d	April — July	30 [h]	
		d	March — July	44 [h]	
9114	Haney near Plush	d	April — June	15.6 [i]	
916	Twentymile near Adel	d	April — June	21 [j]	

SNOW

SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) NORMAL [b]	YEARS OF [c] RECORD
Bald Mountain	6720	g					
Bear Flat Meadow [f]	5900	d					
Camas Creek	5720	d					
Cox Flat [f]	5750	d					
Crane Mountain [f]	6020	d					
Crawder Flat [f]	5200	d					
Dismal Swamp [f] (Calif.)	7000	d					
Finley Carrals [f]	6000	d					
Hart Mountain [f]	6350	d					
Mill Creek	6200	d					
Quartz Mountain (COPCO)	5504	12-31	5	1.4	3.2	3.1	14
Quartz Mountain	5320	12-31	5	1.1	2.4	2.9	13
Sherman Valley [f]	6600	d					
Silver Creek	4900	12-29	3	0.8	3.1	--	0
State Line [f]	5750	d					
Strawberry	5600	d					
Summer Rim	7200	d					
Sycan Flat [f]	5500	d					

[a] Assuming normal meteorological conditions. [b] 1938 - '52, 15 year period. [c] Number of years in 1938 - '52 period. [d] Not scheduled. [e] Corrected to natural flow. [f] Aerial snow depth gage; water content estimated. [g] Report delayed. [h] 1942, '43 and '45 excepted. [i] 1942 excepted. [j] 1938 - 40 excepted.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



WATERSHED LOCATION

RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	NORMAL [b]
Cottonwood	4.1	.0	.0	.0
Drew	62.5	35.0	32.2	32.6[i]

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aeriol Snow Depth Goge
- COPCO Snow Stotion

WATER SUPPLY OUTLOOK
HARNEY BASIN WATERSHEDS
OREGON

as of
January 1, 1959

U.S.DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE and OREGON AGRICULTURAL EXPERIMENT STATION

GENERAL OUTLOOK

The 1959 water supply outlook for Harney County, at this early-winter date, is not good. However, the arrival in early January of some real cold temperatures may foreshadow a return to real winter weather with the beginning of some real snow accumulation.

SNOW-COVER

Snow surveys report no snow on six regularly measured snow courses in the north half of the county. Normally, about 40 percent of the total winter's "snow crop" is accumulated by January 1st. This year there is no "snow crop" as yet! It is possible, although not likely, that future storms will make up the difference.

Beginning the last week of January a series of 8 aerial snow depth gages will be observed from the air. These observations, made the last of January, February and March, will add to the snow data normally provided by regular snow surveys.

SOIL-MOISTURE

The soil mantle in Harney County watersheds is only moderately well wetted. Precipitation* has been only half normal at Burns since October 1.

*Preliminary data provided by U.S. Weather Bureau, Portland, Oregon

Report prepared by:
W. T. Frost and Manes Barton
U. S. Department of Agriculture, Soil Conservation Service
209 S. W Fifth Avenue, Portland, Oregon

WATER SUPPLY OUTLOOK [a]

Local water supply is expressed as "Poor", "Fair", "Averoge" or "Excellent".

STREAM or AREA	FLOW PERIOD		REMARKS
	SPRING SEASON	LATE SEASON	
Catlow Valley Cow Creek Donner und Blitzen River Mill - Coffeepot Creeks Rattlesnake Creek Silver Creek Silvies River Soldier - Prather Creek Trout Creek Whitehorse Creek	Forecasts begin in the February 1 report which will reach you about February 9, 1959		

STREAMFLOW FORECASTS [a] (1,000 Ac. Ft.)

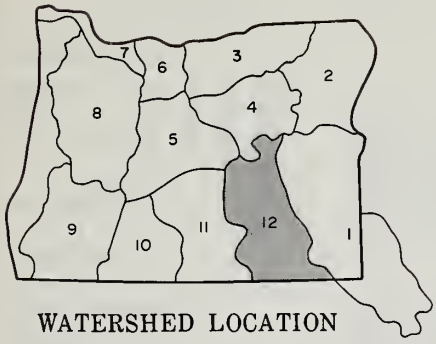
FORECAST POINT NO.	FORECAST POINT NAME	FORECAST THIS YEAR	FORECAST PERIOD	NORMAL [b]	THIS YEAR AS PERCENT OF NORMAL
953	Donner und Blitzen near Frenchglen	d	April - Sept.	66	
966	Silvies near Burns	d	April - Sept.	102	
974	Trout near Denio	d	April - Sept.	9.6	

SNOW

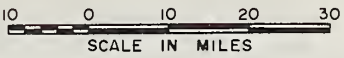
SNOW COURSE NAME	ELEVATION	CURRENT INFORMATION: DATE OF SURVEY	CURRENT INFORMATION: SNOW DEPTH (Inches)	CURRENT INFORMATION: WATER CONTENT (Inches)	PAST RECORD: WATER CONTENT (Inches) LAST YEAR	PAST RECORD: WATER CONTENT (Inches) NORMAL [b]	YEARS OF RECORD [c]
Blue Mountain Springs	5900	12-22	0	0.0	7.2	6.3	15
Delintment Lake	5600	d					
Disaster Peak	6500	g					
Emigrant Butte	5000	d					
Fish Creek	7900	d					
Hart Mountain [f]	6350	d					
Idlewild Camp	5200	12-23	0	0.0	1.3	2.5	14
Izee Summit	5293	12-22	0	0.0	2.4	3.2	10
Lake Creek	5120	d					
Riddle Creek [f]	5800	d					
Rock Spring [f]	5100	12-23	0	0.0	1.6	2.5	14
Silvies	6900	d					
Snow Mountain	6300	d					
Starr Ridge	5150	12-22	0	0.0	1.8	2.1	10
Stinking Water	4800	12-29	T	T	1.5	1.9	10
Trout Creek [f]	7800	d					

[a] Assuming normal meteorological conditions. [b] 1938 - '52, 15 year period. [c] Number of years in 1938 - '52 period. [d] Not scheduled. [e] Corrected to natural flow. [f] Aerial snow depth gage; water content estimated. [g] Report delayed.

HARNEY BASIN WATERSHEDS



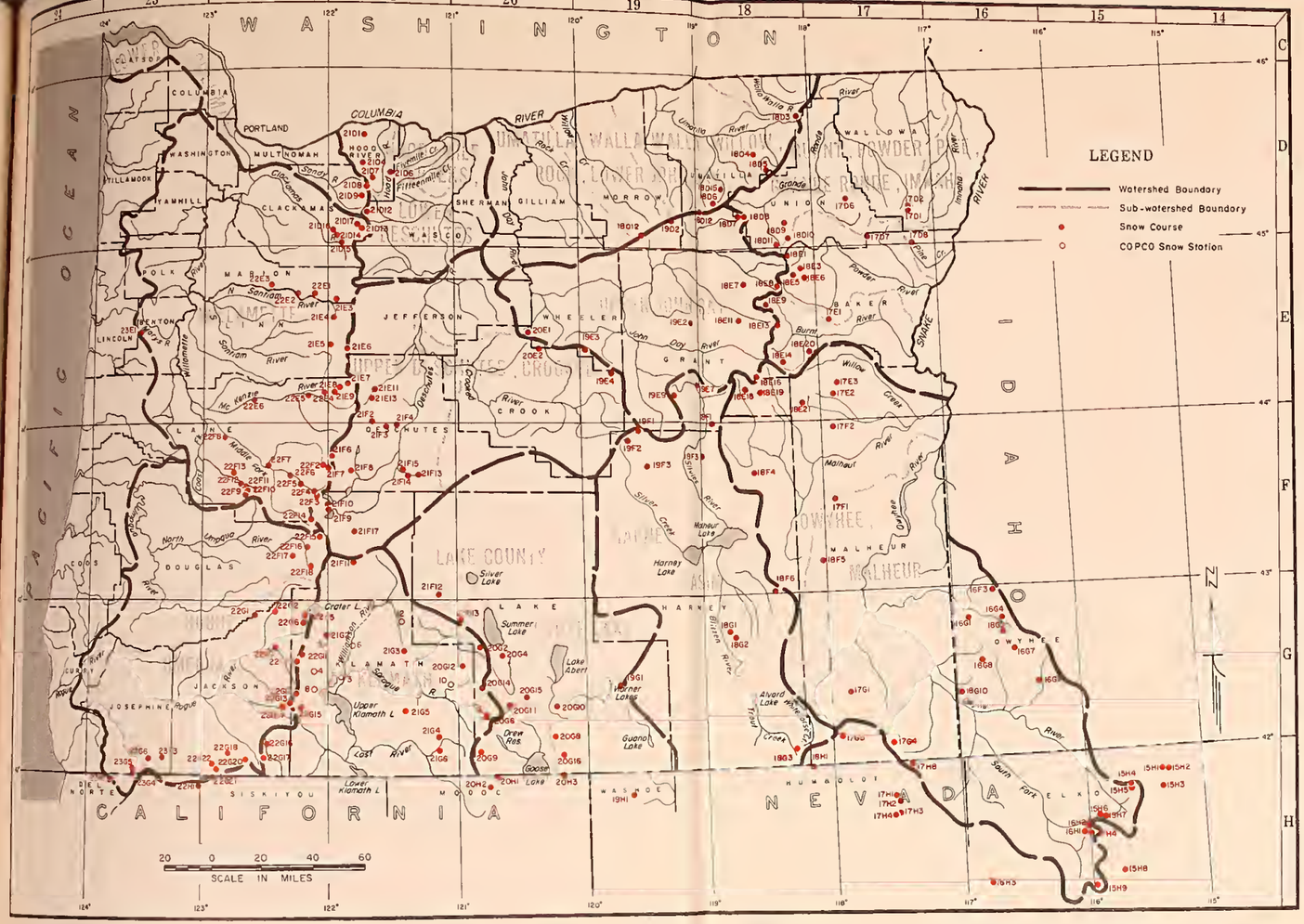
WATERSHED LOCATION



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- ● Snow Course
- T Aerial Snow Depth Gage
- ⚑ Soil Moisture Station

MAP *and* INDEX *to* OREGON SNOW COURSES



OWYHEE, MALHEUR WATERSHEDS (1)

OWYHEE RIVER

Number	Name		Location Sec	Twp	Rge	Elev
	Barren Valley		26	27S	38E	4200
*15H1	Battle Creek	(Ida)	10	11S	1E	5700
	Bear Creek	(Nev)	31	45N	58E	7800
	Big Bend	(Nev)	30	45N	56E	6700
	Bicknell, Lower	(Nev)	25	45N	39E	6700
	Bicknell, Upper	(Nev)	11	45N	39E	7200
*Bull Basin		(Ida)	29	12S	6W	5600
Dinosaur Peak		(Nev)	8	47N	34E	6500
Fish Creek			4	33S	33E	7900
Fox Creek		(Nev)	33	46N	58E	6800
Fry Canyon		(Nev)	31	43N	54E	6700
Gold Creek		(Nev)	31	45N	56E	6600
Granite Peak		(Nev)	22	44N	39E	7800
Highway Camp			36	36S	41E	4300
Hoyle Pasture		(Ida)	31	8S	2W	5800
Jack Creek, Lower		(Nev)	18	42N	53E	6800
Jack Creek, Upper		(Nev)	9	42N	53E	7250
Jack Peak		(Nev)	28	42N	53E	8420
Mouse Canyon			27	40S	44E	6440
Martin Creek		(Nev)	18	44N	40E	6700
Midas		(Nev)	18	39N	46E	7200
Mud Flat		(Ida)	34	9S	2W	5500
*Nickel Sheep Camp		(Ida)	23	10S	4W	5450
Oregon Canyon			9	40S	40E	7240

*Manual snow depth gage

OWYHEE RIVER (Cont'd.)

Number	Name		Location Sec	Twp	Rge	Elev
17H6	Quinn Ridge	(Nev)	9	47N	41E	6300
15H6	Rodeo Flat	(Nev)	36	43N	53E	6800
15H3	76 Creek	(Nev)	6	44N	54E	7100
17F1	Shumway Ranch		29	23S	39E	4400
16F3	Silver City	(Ida)	6	5S	3W	6400
18G1	Silvies		35	32S	32½E	6900
16G1	South Mountain No. 2	(Ida)	35	7S	5W	6340
15H9	Taylor Canyon	(Nev)	35	39N	53E	6200
15H8	Tremewan Ranch	(Nev)	9	39N	55E	5700
16G4	*Triangle	(Ida)	25	7S	3W	5150
18G3	Trout Creek		10	41S	38E	7800

MALHEUR RIVER

Number	Name	Location Sec	Twp	Rge	Elev
18E14	Barney Creek	16	14S	36E	5950
18E16	Blue Mountain Spring	21	15S	35E	5900
17E3	Bonita	5	16S	40E	4600
18E21	*Bully Creek	10	17S	37E	5300
17E2	Clover Creek	36	16S	39E	4100
17F2	*Cottonwood-Indian	10	19S	39E	4320
18E19	Crane Prairie	24	16S	34E	5375
18E20	Eldorado Pass	20	14S	38E	4600
18E18	Lake Creek	10	16S	33½E	5120
18F6	Riddle Creek	21	29S	35E	5800
18F1	Rock Spring	23	18S	32E	5100
17F1	Shumway Ranch	29	23S	39E	4400
18F4	Stinking Water	33	21S	34E	4800

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS (2)

BURNT RIVER

Number	Name	Location Sec	Twp	Rge	Elev
18E14	Barney Creek	16	14S	36E	5950
18E13	Blue Mountain Summit	6	12S	36E	5098
17E1	Dooley Mountain	32	11S	40E	5430
18E20	Eldorado Pass	20	14S	38E	4600
18E8	Gold Center	21	9S	36E	5340
18E9	Tipton	34	10S	35½E	5100

POWDER RIVER

Number	Name	Location Sec	Twp	Rge	Elev
18E1	Anthony Lake	18	7S	37E	7125
18E5	Bourne	33	8S	37E	5800
17E1	Dooley Mountain	32	11S	40E	5430
18E3	Ellertson Meadows	18	8S	38E	5400
18E8	Gold Center	21	9S	36E	5340
18E6	Goodrich Lake	4	9S	38E	6775
18D10	Summit Springs	9	6S	37E	6000
17D7	Taylor Green	3	6S	42E	5740

PINE CREEK

Number	Name	Location Sec	Twp	Rge	Elev
17D8	Schneider Meadows	35	6S	45E	5400

GRANDE RONDE RIVER

Number	Name	Location Sec	Twp	Rge	Elev
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2	Aneroid Lake No. 2	16	4S	45E	7000
18E1	Anthony Lake	18	7S	37E	7125
18D9	Beaver Reservoir	8	5S	37E	5340
18D11	Camp Carson	33	6S	36E	5970
18D8	County Line	28	4S	34E	4800
18D6	Lucky Strike	28	3S	32E	5050
18D5	Meacham	24 & 25	1S	35E	4300
17D6	Moss Spring	28	3S	41E	5850
18D7	Schoolmarm	28	4S	34E	4775
18D10	Summit Springs	9	6S	37E	6000
17D7	Taylor Green	3	6S	42E	5740
18G3	Tollgate	32	4N	38E	5070

IMNAHA RIVER

Number	Name	Location Sec	Twp	Rge	Elev
17D1	Aneroid Lake No. 1	16	4S	45E	7480
17D2	Aneroid Lake No. 2	16	4S	45E	7000

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS (3)

UMATILLA RIVER

Number	Name	Location Sec	Twp	Rge	Elev
19D2	Arbuckle Mountain	33	4S	29E	5400

UMATILLA RIVER (Cont'd.)

Number	Name	Location Sec	Twp	Rge	Elev
18D12	Battle Mountain Summit	29	3S	31E	4340
18D4	Emigrant Springs	29	1N	35E	3925
18D6	Lucky Strike	28	3S	32E	5050
18D15	Pearson Creek	31	2S	33E	3000
18D5	Meacham	24 & 25	1S	35E	4300
18D3	Tollgate	32	4N	38E	5070

WALLA WALLA RIVER

Number	Name	Location Sec	Twp	Rge	Elev
18D3	Tollgate	32	4N	38E	5070

WILLOW CREEK

Number	Name	Location Sec	Twp	Rge	Elev
19D2	Arbuckle Mountain	33	4S	29E	5400

UPPER JOHN DAY WATERSHEDS (4)

UPPER JOHN DAY RIVER

Number	Name	Location Sec	Twp	Rge	Elev
18E1	Anthony Lake	18	7S	37E	7125
19D2	Arbuckle Mountain	33	4S	29E	5400
18D12	Battle Mountain Summit	29	3S	31E	4340
19E2	Beech Creek Summit	4	12S	30E	4800
18E16	Blue Mountain Spring	21	15S	35E	5900
18E13	Blue Mountain Summit	6	12S	36E	5098
19E3	Derr	14	13S	23E	5670
18E11	Dixie Springs	28	11S	34E	6650
18E8	Gold Center	21	9S	36E	5340
19E9	Izee Summit	28	16S	29E	5293
18D6	Lucky Strike	28	3S	32E	5050
20E1	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
18E7	Olive Lake	14	9S	33½E	6000
18D7	Schoolmarm	28	4S	34E	4775
19F1	Snow Mountain	1	19S	26E	6300
19E7	Starr Ridge	20	15S	31E	5150
18E9	Tipton	34	10S	35½E	5100

UPPER DESCHUTES, CROOKED WATERSHEDS (5)

UPPER DESCHUTES RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21E11	Black Pine Spring	14	16S	9E	4600
21F8	Caldwell Ranch	30	21S	8E	4400
22F3	Cascade Summit	7	23S	6E	4880
21F7	Charlton Lake	23	21S	6E	5750
21F11	Chemult	21	27S	8E	4760
21F9	Crescent Lake	11	24S	6E	4760
21F14	Fire Road	36	21S	11E	5050
21E6	Hogg Pass	24	13S	7½E	4755
21F4	Hungry Flat	30	18S	11E	4400
21F6	Irish-Taylor	25	20S	6E	5500
21F17	Mowich	29	25S	8E	4700
21F10	New Crescent Lake	11	24S	6E	4800
21F2	New Dutchman Flat	21	18S	9E	6400
21F13	Paulina Lake	34	21S	12E	6330
21F15	Paulina Prairie	28	21S	11E	4285
21F3	Tangent	28	18S	10E	5400
21E13	Three Creek Meadows	3	17S	9E	5600
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600
22F15	Windigo Pass	20	25S	6E	5800

CROOKED RIVER

Number	Name	Location Sec	Twp	Rge	Elev
19E3	Derr	14	13S	23E	5670
20E1	Marks Creek	25	12S	19E	4540
20E2	Ochoco Meadows	21	13S	20E	5200
19F1	Snow Mountain	1	19S	26E	6300
19E4	Tamarack	8	15S	25E	4800

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS (6)

HOOD RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21D6	Brooks Meadows	2	2S	10E	4300
21D1	Greenpoint Ridge	28	2N	9E	3400
21D8	Phlox Point	6	3S	9E	5600
21D4	Red Hill	21	1S	9E	4400
21D9	Still Creek	25	3S	8½E	3700
21D7	Tilly Jane	15	2S	9E	6000

MILE CREEKS - MOSIER CREEK

Number	Name	Location Sec	Twp	Rge	Elev
21D6	Brooks Meadows	2	2S	10E	4300

LOWER DESCHUTES RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21D12	Clear Lake	29	4S	9E	3500
21B6	Hogg Pass	24	13S	7½E	4755

LOWER COLUMBIA WATERSHEDS (7)

SANDY RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700

WILLAMETTE WATERSHEDS (8)

CLACKAMAS RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21D15	Big Bottom	25	6S	7E	2118
21D13	Clackamas Lake	35	5S	8½E	3400
21D12	Clear Lake	29	4S	9E	3500
21D16	Lake Harriet	4	6S	7E	2045
21D14	Peavine Ridge	14 & 15	6S	7E	3500
21D8	Phlox Point	6	3S	9E	5600
21D9	Still Creek	25	3S	8½E	3700
21D17	Timothy Lake	26	5S	8E	3295

SANTIAM RIVER

Number	Name	Location Sec	Twp	Rge	Elev
22E1	Detroit (town)	1	10S	5E	1500±
22E2	Detroit Dam	7	10S	5E	1580
21E6	Hogg Pass	24	13S	7½E	4755
21E4	Marion Forks	28	11S	7E	2730
22E3	Mill City	29	9S	3E	826
21E5	Santiam Junction	14	13S	7E	3990
21E3	Whitewater Bridge	28	10S	7E	2175

McKENZIE RIVER

Number	Name	Location Sec	Twp	Rge	Elev
21E8	Dead Horse Grade	13	16S	7E	3800
22E4	Lost Creek Ranch	24	16S	6E	1746
21E7	McKenzie	35	15S	7½E	4800
22E5	McKenzie Bridge	13	16S	5E	1372
22E6	Vida	28	16S	2E	800
21E9	White Branch Slide	15	16S	7E	2800

MIDDLE FORK WILLAMETTE RIVER

Number	Name	Location Sec	Twp	Rge	Elev
22F3	Cascade Summit	7	23S	6E	4880
21F7	Charlton Lake	23	21S	6E	5750
22F6	McCredie Springs	36	21S	4E	2120
22F8	Meridian Dam	13	19S	1W	750
22F7	Oakridge	16	21S	3E	1310
22F5	Railroad Overpass	27	22S	5E	2750
22F4	Salt Creek Falls	33	22S	6E	4000
22F2	Waldo Lake	15	21S	6E	5500
22F14	Willamette Pass	33	24S	5½E	5600

COAST FORK WILLAMETTE RIVER

Number	Name	Location Sec	Twp	Rge	Elev
22F9	Champion	12	23S	1E	4500
22F10	Golden Curry Creek	1	23S	1E	3136
22F13	Layng Creek R. S.	31	21S	1E	1200
22F12	Lund Park	22	22S	1E	1740
22F11	Weaver Creek	35	22S	1E	2440

MARY'S RIVER

Number	Name	Location Sec	Twp	Rge	Elev
23E1	Mary's Peak	21	12S	7W	3620

ROGUE, UMPQUA WATERSHEDS (9)

ROGUE RIVER

Number	Name		Location Sec	Twp	Rge	Elev
23G4	Althouse		17	41S	7W	4530
22G6	Annie Spring		19	31S	6E	6018
22G21	Big Red Mountain		31	40S	1W	6500
22G13	Billie Creek Divide		30	36S	5E	5300
22G14	Fish Lake		3	37S	4E	4865
22G12	Fourmile Lake		9	36S	5E	6000
23G3	Grayback Peak		9	40S	5W	6000
23H1	Hazel View	(Cal)	9	48N	1E	2500
22G17	Hobart Lake		17	40S	3E	5010
22G16	Hyatt Prairie Reservoir		15	39S	3E	4900
22G22	Little Red Mountain		25	40S	2W	6500
23G6	Oregon Caves		16	40S	6W	4000
23G5	Page Mountain		8	41S	7W	4045
22G5	Park Headquarters		8	31S	6E	6150
22H1	Scragg Mountain	(Cal)	9	47N	10W	6200
22G10	Seven Lakes No. 1		3	34S	5E	6800
22G11	Seven Lakes No. 2		26	33S	5E	6200
22G2	Silver Burn		30	30S	4E	3720
22G20	Siskiyou Summit		17	40S	2E	4630
22G9	South Fork Canal		12	33S	3E	3500
22G18	Wagner Butte		1	40S	1W	6900
22G1	Whaleback		3	31S	2E	5140

UMPQUA RIVER

Number	Name	Location Sec	Twp	Rge	Elev
22F9	Champion	12	23S	1E	4500
22F18	Diamond Lake	29	27S	6E	5315
22F16	North Umpqua	19	26S	6E	4215
22F17	Trap Creek	1	27S	4E	3800
22G1	Whaleback	3	31S	2E	5140
22F15	Windigo Pass	20	25S	6E	5800

KLAMATH WATERSHEDS (10)

KLAMATH RIVER

Number	Name		Location Sec	Twp	Rge	Elev
22G6	Annie Spring		19	31S	6E	6018
22G13	Billie Creek Divide		30	36S	5E	5300
21G5	Bly Mountain		15 & 22	37S	11E	5090
21F11	Chemult		21	27S	8E	4760
20G12	*Crazyman Flat		9	34S	15E	6100
20H2	*Crowder Flat	(Cal)	30	47N	11E	5200
21G6	*Dog Hollow		1	40S	1½E	4900
20G14	*Finley Corrals		11	36S	10E	6000
22G12	Fourmile Lake		9	36S	5E	6000
21G4	Gerber		12	39S	13E	4850
22G16	Hyatt Prairie Reservoir		15	39S	3E	4900
22G15	Lake of the Woods		11	37S	5E	4960
22G5	Park Headquartera		8	31S	6E	6450
20G6	Quartz Mountain		2	38S	16E	5320
22G10	Seven Lakes No. 1		3	34S	5E	6800
22G11	Seven Lakes No. 2		26	33S	5E	6200
20H1	*State Line	(Cal)	21	48N	11E	5750
20G9	Strawberry		4	40S	16E	5600
20G2	Summer Rim		15	33S	16E	7200
21G2	Sun Mountain		22	32S	7½E	5350
20G13	*Sycan Flat		25	31S	14E	5500
21G3	Taylor Butte		16	33S	11E	5100

THE CALIFORNIA OREGON POWER COMPANY'S SNOW STATIONS

1	Beatty (COPCO)	22	36S	12E	4300
10	Bly 101 Ranch (COPCO)	22	35S	14E	4800
3	Chiloquin (COPCO)	34	34S	7E	4187
4	Crystal (COPCO)	26	34S	6E	4200
5	Fort Klamath (COPCO)	22	33S	7½E	4150
8	Harriman Lodge (COPCO)	3	36S	6E	4200
6	Kirk (COPCO)	1	33S	7E	4533
9	Quartz Mountain (COPCO)	33	37S	16E	5504
12	Yamsey (COPCO)	20	31S	11E	4600

LAKE COUNTY, GOOSE LAKE WATERSHEDS (11)

GOOSE LAKE

Number	Name		Location Sec	Twp	Rge	Elev
20G15	*Bear Flat Meadow		27	36S	19E	5900
20G8	Camas Creek		5	39S	21E	5720
20G11	*Cox Flat		16	37S	18E	5750
20G16	*Crane Mountain		13	40S	21E	6020
20H2	*Crowder Flat	(Cal)	30	47N	11E	5200
20H3	*Diamal Swamp	(Cal)	31	48N	16E	7000
20G6	Quartz Mountain		2	38S	16E	5320
20G10	*Sherman Valley		15	37S	21E	6600

SUMMER LAKE

Number	Name	Location Sec	Twp	Rge	Elev
20G2	Summer Rim	15	33S	16E	7200

SILVER LAKE

Number	Name	Location Sec	Twp	Rge	Elev
21F12	Silver Creek	25 & 26	29S	13E	4900
20G13	*Sycan Flat	25	31S	14E	5500

WARNER LAKE

Number	Name		Location Sec	Twp	Rge	Elev
20G8	Camas Creek		5	39S	21E	5720
20G16	*Crane Mountain		13	40S	21E	6020
20H3	*Diamal Swamp	(Cal)	31	48N	16E	7000
19G1	*Hart Mountain		1	36S	29E	6350
20G10	*Sherman Valley		15	37S	21E	6600

GUANO LAKE

Number	Name		Location Sec	Twp	Rge	Elev
19H1	Bald Mountain	(Nev)	17	45N	21E	6720
19G1	*Hart Mountain		1	36S	29E	6350

HARNEY BASIN WATERSHEDS (12)

SILVIES RIVER - SILVEN CREEK

Number	Name	Location Sec	Twp	Rge	Elev
19F2	Delintment Lake	28	19S	26E	5600
19F3	Emigrant Butte	14	21S	27E	5000
18F3	Idlewild Camp	33	20S	31E	5200
19E9	Izee Summit	28	16S	29E	5293
18F1	Rock Spring	23	18S	32E	5100
19F1	Snow Mountain	1	19S	26E	6300
19E7	Starr Ridge	20	15S	31E	5150
18F4	Stinking Water	33	21S	34E	4800

OONNER UND BLITZEN RIVER

Number	Name		Location Sec	Twp	Rge	Elev
18G2	Fish Creek		4	33S	33E	7900
19G1	*Hart Mountain		1	36S	29E	6350
18F6	Riddle Creek		21	29S	35E	5800
18G1	Silvies		35	32S	32½E	6900

TROUT AND WHITEHORSE CREEKS

Number	Name		Location Sec	Twp	Rge	Elev
18H1	Disaster Peak	(Nev)	8	47N	34E	6500
17G5	Oregon Canyon		9	40S	40E	7240
18G3	Trout Creek		10	41S	38E	7800

CORRECTIONS - SNOW MAP AND INDEX

NEW SNOW COURSES (Too late for map entry)

Number	Name	Location Sec.	Twp.	Rge.	Elev.
	OWYHEE RIVER				
18G7	*"V" Lake	31	35½S	32¾E	6600
	MALHEUR RIVER				
18F7	*Call Meadows	29	20S	33E	5340
18E22	*Logan Valley	13	16S	33½E	5100
	HOOD RIVER				
21D20	Pineball Springs	31	1S	11E	3850
21D21	Urich Ranch Junction	28	1S	11E	3350
	MILE CREEKS - MOSIER CREEK				
21D20	Pineball Springs	31	1S	11E	3850
21D21	Urich Ranch Junction	28	1S	11E	3350
	UMPQUA RIVER				
22F19	Diamond-Crater Summit	34	28S	6E	5800
	KLAMATH RIVER				
22G24	Cold Springs Camp	12	35S	5E	6100
22F19	Diamond-Crater Summit	34	28S	6E	5800
21F18	Diamond Lake Jct. (97)	1	29S	7E	4600
22G25	Pelican Guard Station	9	36S	6E	4150
	SILVIES RIVER - SILVER CREEK				
18F7	*Call Meadows	29	20S	33E	5340
	DONNER UND BLITZEN RIVER				
18G7	*"V" Lake	31	35½S	32¾E	6600
	TROUT and WHITE HORSE CREEKS				
18G6	*Denio Creek	14	41S	34E	6000

ERRATA

16G10 *Bull Basin - should read Range 5 west.
18F6 *Riddle Creek - is aerial snow depth gage.
17G5 *Oregon Canyon - is aerial snow depth gage.
18G5 *Trout Creek - is aerial snow depth gage and is shown incorrectly as 18G3.
18D12 Shown in 19 D block on map should be deleted.

*Aerial snow depth gage.

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The following organizations cooperate in the Oregon Snow Survey work:

STATE
- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon Agricultural Experiment Station
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil Conservation Districts of Oregon

FEDERAL
- Department of Agriculture
  - Cooperative Extension Service
  - Forest Service
  - Soil Conservation Service
- Department of Commerce
  - Weather Bureau
- Department of the Interior
  - Bonneville Power Administration
  - Bureau of Reclamation
  - Fish and Wildlife Service
  - Geological Survey
  - Indian Service
  - National Park Service
- Department of National Defense
  - Corps of Army Engineers

PUBLIC UTILITIES
- California-Pacific Utilities Company
- Pacific Power and Light Company
- Portland General Electric Company
- The California Oregon Power Company

MUNICIPALITIES
- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS
- Associated Ditch Companies
- Central Oregon Irrigation District
- Deschutes County Municipal Improvement District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Jordan Valley Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Talent Irrigation District
- Vale-Oregon Irrigation District
- Warmsprings Irrigation District

PRIVATE ORGANIZATIONS
- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

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